

THE MILLING WORLD

AND

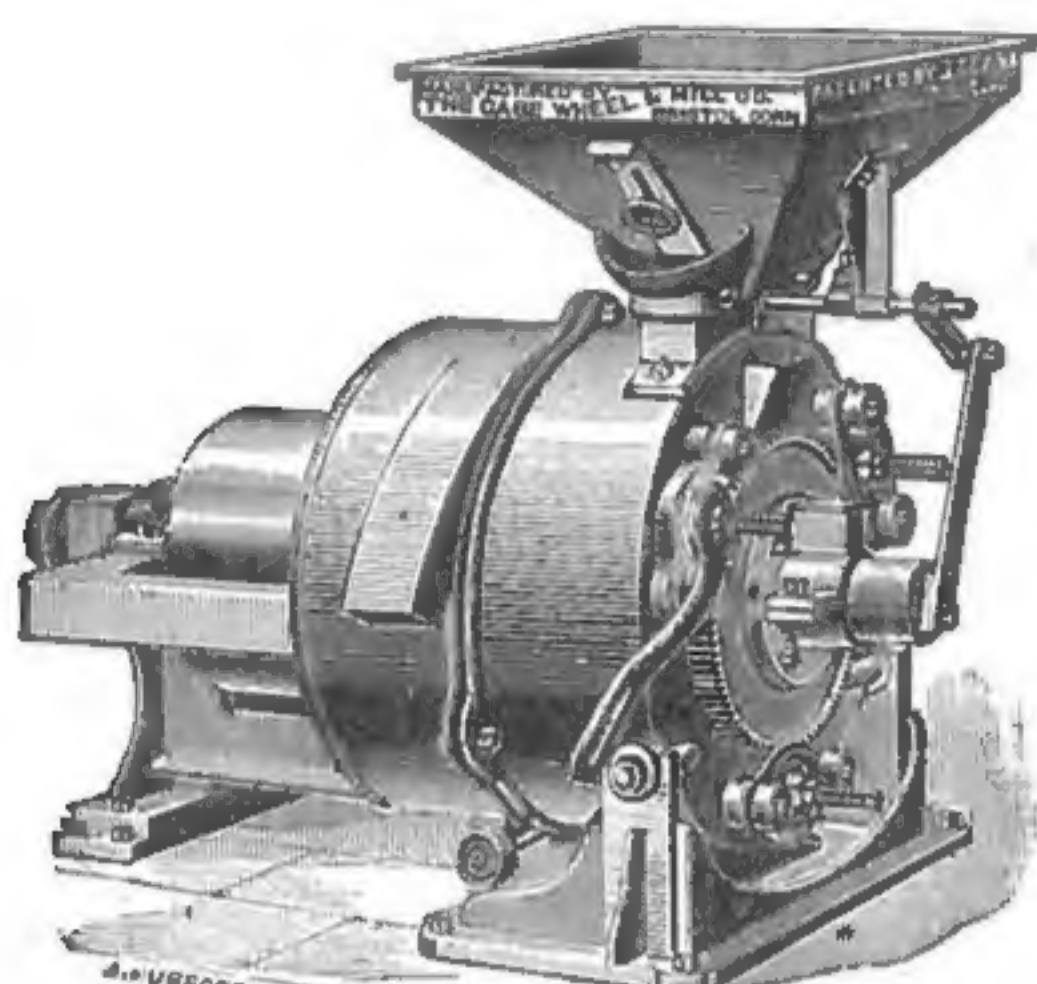
CHRONICLE OF THE GRAIN AND FLOUR TRADE

PUBLISHED EVERY MONDAY MORNING.

VOL. XXI. No. 26.

BUFFALO, N. Y., FEBRUARY 24, 1890.

\$1.50 PER YEAR.



VICTORY OVER ALL OTHERS. SINGLE & DOUBLE VERTICAL GRINDING MILLS.

(J. T. CASE'S PATENT.)

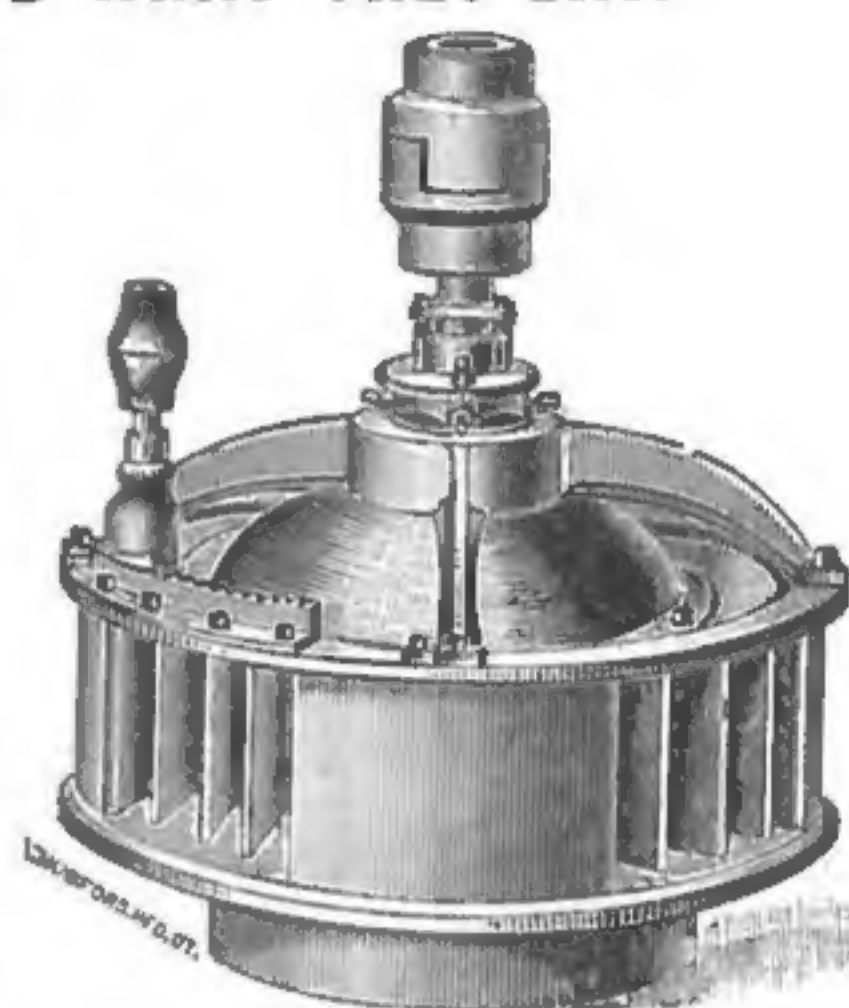
FACTS ARE MIGHTIER THAN ASSERTIONS. READ WHAT THEY SAY:

"Our 20-inch mill made by the Case Wheel & Mill Co. is in every respect satisfactory, easy to handle, and best results obtained of any mill in the country, with same quantity coal and power."—A. S. RUSSELL & Co., Meriden, Conn.
 "Superior to any mill in use."—GEO. WESTON, Bristol, Conn.
 "The best satisfaction in quantity and quality."—CHILD'S ELEVATOR, Manchester, Ct.
 "We take pleasure in recommending it."—GARLAND, LINCOLN & Co., Worcester, Mass.

SEND FOR CATALOGUE—ILLUSTRATED AND DESCRIPTIVE.

The Improved National Turbine Water Wheel

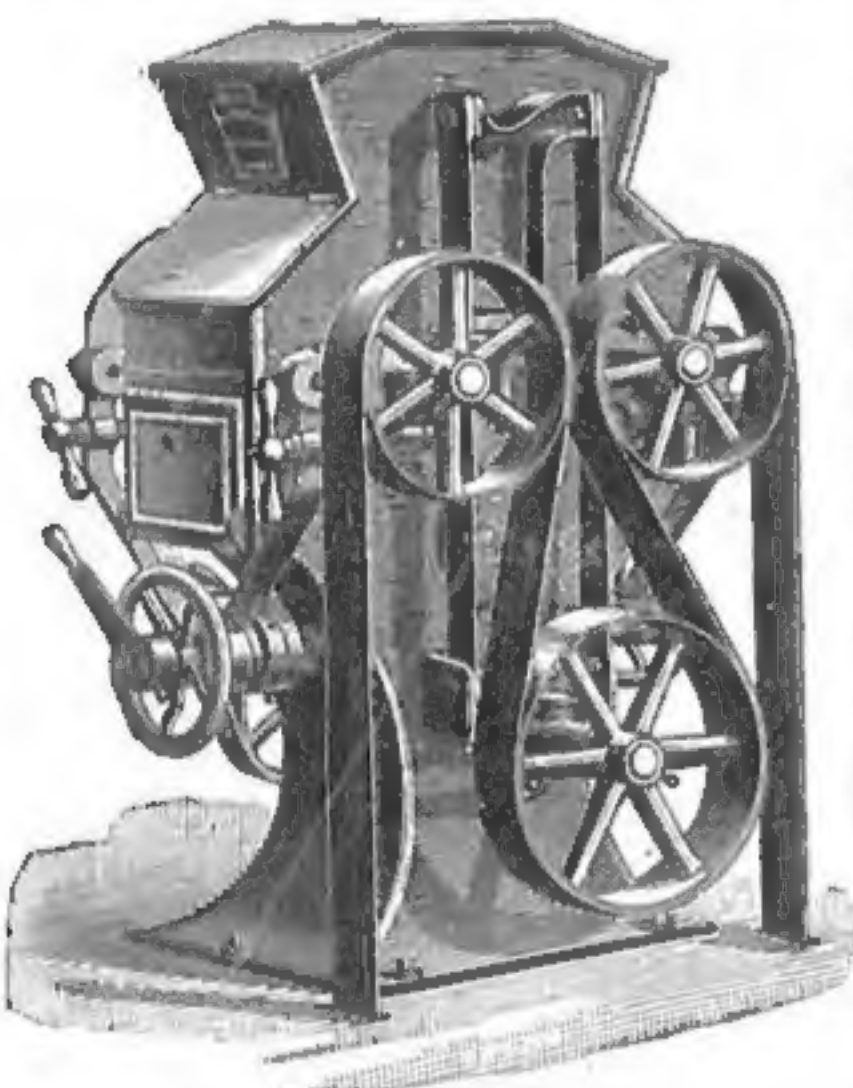
The Best for Economy; The Best for Durability; The Best for Power. ONE THOUSAND FIVE HUNDRED NATIONAL WATER WHEELS IN USE Prove that our Assertions are Supported by the Leading Manufacturers in the Country. Send for illustrated catalogue and prices to the manufacturers.



The Case Wheel & Mill Co., Bristol, Conn.

THE "KEYSTONE" ROLLER MILL BEATS THEM ALL.

THE PROOF.



THE J. B. ALLFREE CO.

DEAR SIR: It has been a year since we started up the 50-barrel mill you built for us. We make four breaks on wheat, and will just say that we never, in our lives, seen or used any machinery for the manufacture of flour equal to this which you put in for us. The Roller Machines (Allfree's patent) can't be beat in the world for simplicity of construction. They have the best adjustments of any mill known, and we think we know whereof we speak. We have not had a break nor a jar since we started. We defy any man, or set of men, to produce a system of separation that will beat the Allfree System. We make two grades of flour which we call the first, or baker's flour, and the other the low grade; and out of the tests we have made, have, on a fair test from 60 lbs. of wheat, 44 lbs. of Crown Prince, or baker's flour, and 2 lbs. of low grade. Our Crown Prince sells a little higher in the market than other grades from other mills, and we have been complimented on our flour quite often, as it is always in demand. It takes less power to run this machinery than any we have seen; it will do more grinding, and do it easier than any mills we have used with the same amount of power. Our mill is built for a fifty-barrel mill. When the wheat is in good condition we make 65 barrels, and do it easy. Our trade has increased from the very start, and we have not had a single complaint. Our stock from this mill is always in demand, and we will say that if our brother millers want to get what there is in the wheat out of it, and get a flour that can't be beat anywhere, they had better adopt the Allfree System, for it will save them money dead sure. On the Allfree Rolls we have a double adjustment; we can set both ends of the rolls separate from each other, or, with a single hand wheel, change the whole roll at the same time. The adjustments on these rolls are worth two other makes, and if there is any miller who doubts this let him come and visit us and he can see for himself; we will take pleasure in showing any body that will come and see this mill work. Millers are always welcome.

We remain yours,

DAVIS & CLARK.

—ADDRESS—

THE J. B. ALLFREE CO., 76 to 86 Shelby St., INDIANAPOLIS, IND.

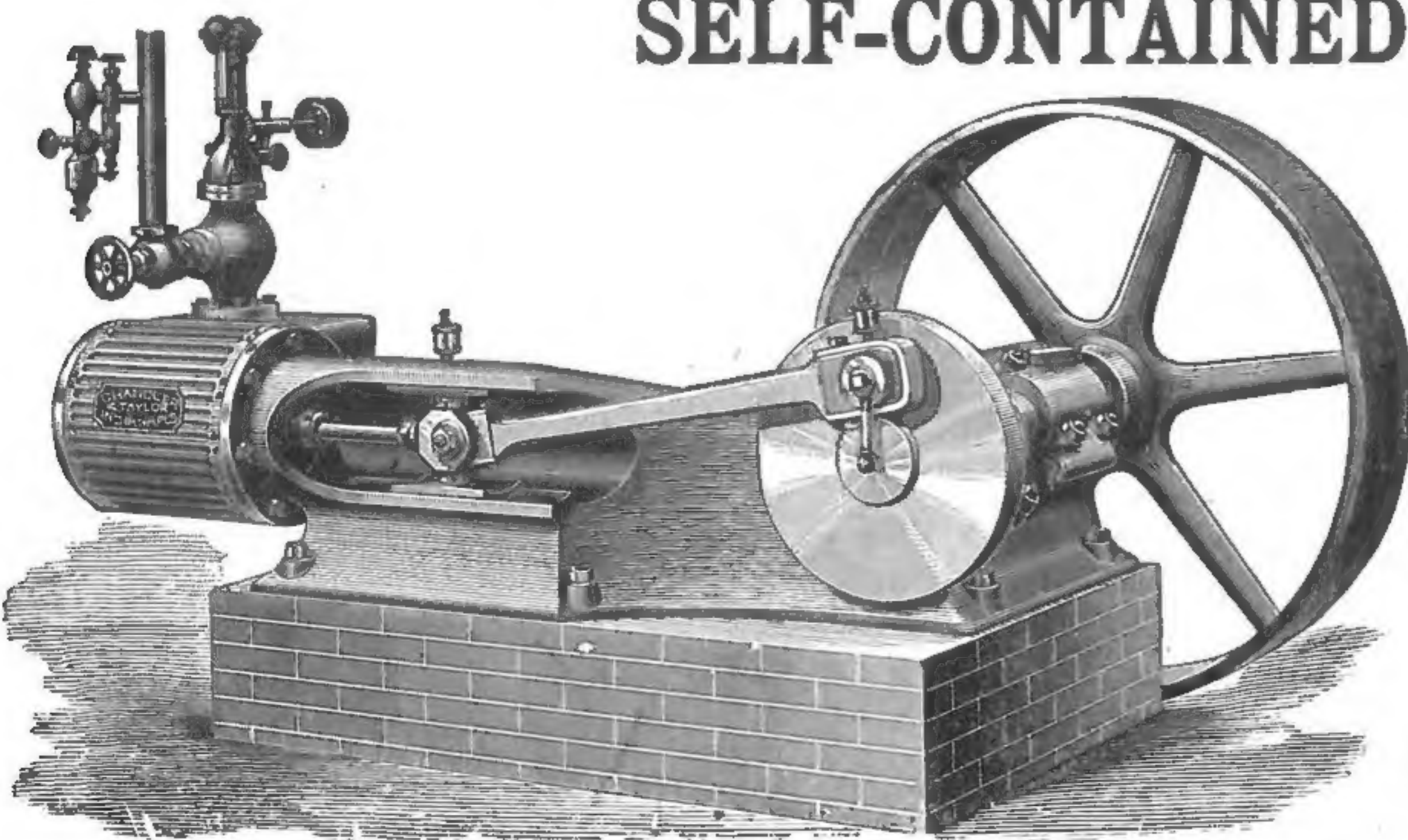
SELF-CONTAINED STEAM ENGINES Stationary or Semi-Portable.

High Standard Maintained.
Prices Greatly Reduced.

WRITE FOR NEW ILLUSTRATED
CATALOGUE NO. 32.

Chandler & Taylor Co.
Indianapolis, Ind.

Engines, Saw-Mills and Drain Tile
Machinery a Specialty.

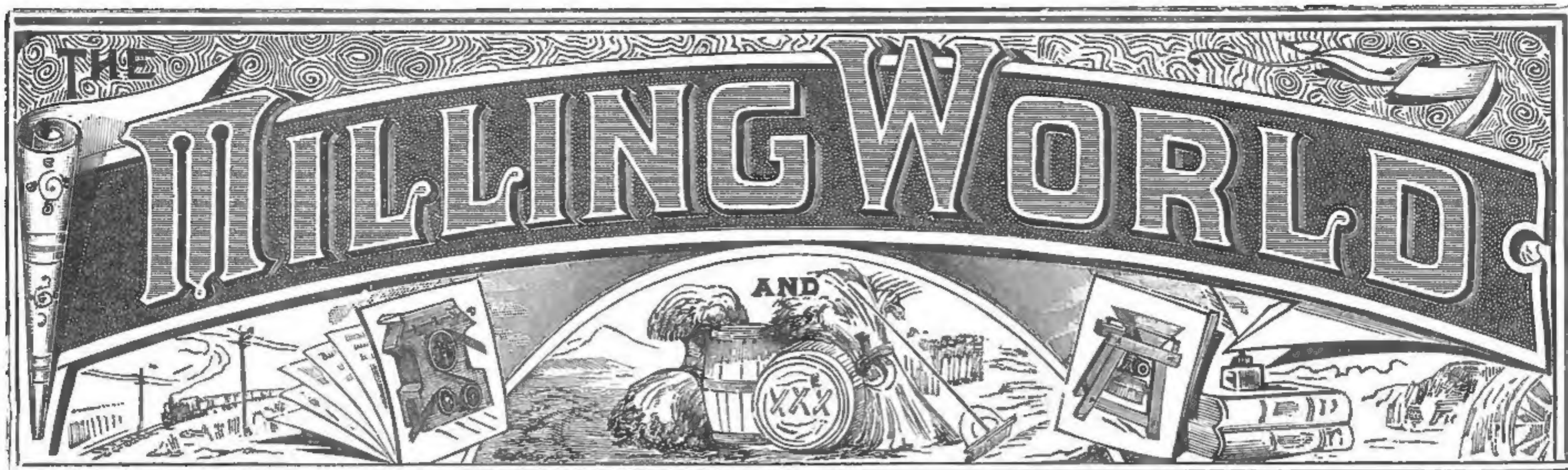


CASE.

CASE MFG. CO., COLUMBUS, O.
GENTLEMEN: If we were to build a hundred mills we
would not permit any other than the "CASE" roll to
enter them. They are the best roll on earth.
Yours truly,
W. C. MANSFIELD & CO.

W. C. MANSFIELD & CO.,
MERCHANT MILLERS,
CLEVELAND, TENN., AUG. 29, 1889.

CASE.



CHRONICLE OF THE GRAIN AND FLOUR TRADE
PUBLISHED EVERY MONDAY MORNING.

VOL. XXI. No. 26.

BUFFALO, N. Y., FEBRUARY 24, 1890.

\$1.50 PER YEAR.

JUDGE BLODGETT's compliments to the Honorable Rodney Mason! What shall the harvest be?

WONDER if Judge Blodgett's decision against the Consolidated Roller Mill Company will frighten any millers into the Millers' National Association? That suit brings no grist to the "National" mill.

AMONG our new advertisers in this issue is the well-known house of Burnham Brothers, of York, Pa., manufacturers of the celebrated Burnham new improved "Standard" turbine water-wheel. Users of wheels will find it profitable to correspond with this house for descriptions and terms.

NO, IT has not been a phenomenally frigid winter, meteorologically, but it is safe to say that the Consolidated Roller Mill Company has managed to experience sufficient frigidity to destroy the comfort of its members and of the eminent lawyers who have been guiling it into the swamps of litigation by an ignis-fatuus of great royalties on roller-mills. It is well not to grasp at the whole earth at once, as patent litigants in the United States have more than once discovered to their very great cost and their intolerable discomfort. Meanwhile, millers and roll-makers in this country are pleased at the decision of Judge Blodgett, which may be accepted as settling definitely this particular line of patent suits.

THE Argentine Republic "boom" shows signs of collapse. The sales of land appear to have ceased almost entirely. Last October, when the "boom" was at its height, when assisted immigrants were pouring into the country, the sales of land footed \$40,000,000. In November the sales footed \$19,000,000. In December the total was only about \$2,000,000. In January the total was less than \$1,000,000. Every commercial interest in the country is in a chaotic state, and yet the government plans to employ millions of dollars of the public money to induce Europeans to settle in the Argentine Republic. The worst feature of the situation is the undesirable character of the large majority of the assisted immigrants, most of them being shiftless, indolent, ignorant, unambitious peasants of the very poorest class from Italy and other southern European countries. The Argentine "boom" fever must have its sequence. No boomed country has ever escaped the consequences of booming, and the Argentine Republic invites the evil consequences in the most intensified form.

WHAT a wholly ridiculous "National Association" it will be after the convention in Minneapolis, in June next, in case that proposed new constitution is rammed down its oesophagus! Imagine an association in which *men* do not count and *barrels of flour* do the voting! The "National" is now and has for a long time been a fantastic organization, but the climax of fantasies will be reached only when barrels of flour do the voting. When the presiding officer calls for the votes, it will be an inspiring sight to see the "patents" and "straights" arrayed against the "low-grades" and "red-dog" and settling matters by numbers of barrels! A convention offering such a sight for gods and men would fill all

beholders with inextinguished laughter and would need no \$6,000 banquet to bring it to a fitting climax! That new constitution, read between the lines, displays the awful effects of Minnesota ozone on the creators of "National" constitutions. It might be appropriate to have a preamble to that constitution, similar to the one that introduces Uncle Sam's constitution, in which the equality of flour-barrels should be assured beyond doubt or dispute. This hint is "chucked out" free. The "National" managers are not compelled to act upon it. We give it in the interests of general absurdity and ludicrousness.

BREADSTUFF exportations during January, this year, showed some improvement, notwithstanding the general reports of general depression in all grain and flour markets. The January exports of wheat grain were 3,905,743 bushels, worth \$3,135,675, against 3,174,046 bushels, worth \$2,850,082, in January of last year. For the seven months ending with January the wheat exports were 32,271,136 bushels, worth \$26,743,557, against 32,120,341 bushels, worth \$29,390,906 for the same months a year ago. In wheat flour the improvement is decided, January this year showing an exportation of 899,734 barrels, worth \$4,234,787, against 680,538 barrels, worth \$3,417,254 in January last year, while the seven-month period ending with January this year shows 6,826,871 barrels, worth \$32,319,693, against 5,560,688 barrels, worth \$26,847,385 for the same period a year ago. In the other lines the seven-month period ending with January this year shows barley exports worth \$546,781, against \$765,446 last year; corn 42,020,930 bushels, worth \$18,088,268, against 31,136,599 bushels, worth \$15,879,363; cornmeal \$542,331, against \$560,868; oats \$1,041,725, against \$173,088; oatmeal \$432,331, against \$140,042; and rye \$493,337, against \$57,785. The total breadstuff exports for January, this year, were \$11,558,674, against \$10,833,224 last year, and for the seven-month period \$80,208,024, against \$73,814,700 a year ago. The wheat and flour exports for the seven months of the current fiscal have been about 66,405,491 bushels, worth \$59,063,250, against 59,923,781 bushels, worth \$56,238,291, in the corresponding time a year ago. The present month is not witnessing the large exports of wheat grain that have been anticipated, and, as the Australian new crop is now afloat and the Argentine crop is now ready for the market, it appears that European importers will draw upon the United States only at reduced prices, probably at prices even lower than the present abnormally low prices. Of course, the Southern Hemisphere crop can not be relied upon to furnish a considerable portion of the supplies needed in Europe, but the European importers will shrewdly use the southern surplus as a hammer with which to beat down the price of American wheat. European importers have it all their own way in reporting the Argentine and Australian crops, and there is no doubt that every report they have sent out concerning those crops is grossly exaggerated. American exporters make no effort to find out the truth in time to affect prices, and year after year they go on selling to Europe at Europe's own figures, graded on Europe's fictitious figures on crops in far-away lands, that never come up to the bear figures of the harvest season in those lands.

Dawson's Roller Mill

Is acknowledged to be the very best in the market. It has our Patent Automatic Centrifugal feeder, never failing to feed the stock the full length of rolls in an even sheet. It is the Latest and Best feed out, uses less power and is simple in construction. It can be placed on any style of machine with little expense. We use for roll bearings phosphor-bronze metal which will admit rolls being run at any speed without heating and with little friction, and uses little oil. We use the Dawson Corrugation, which is admitted the best in long or short system mills as the action is granulating rather than CUTTING.

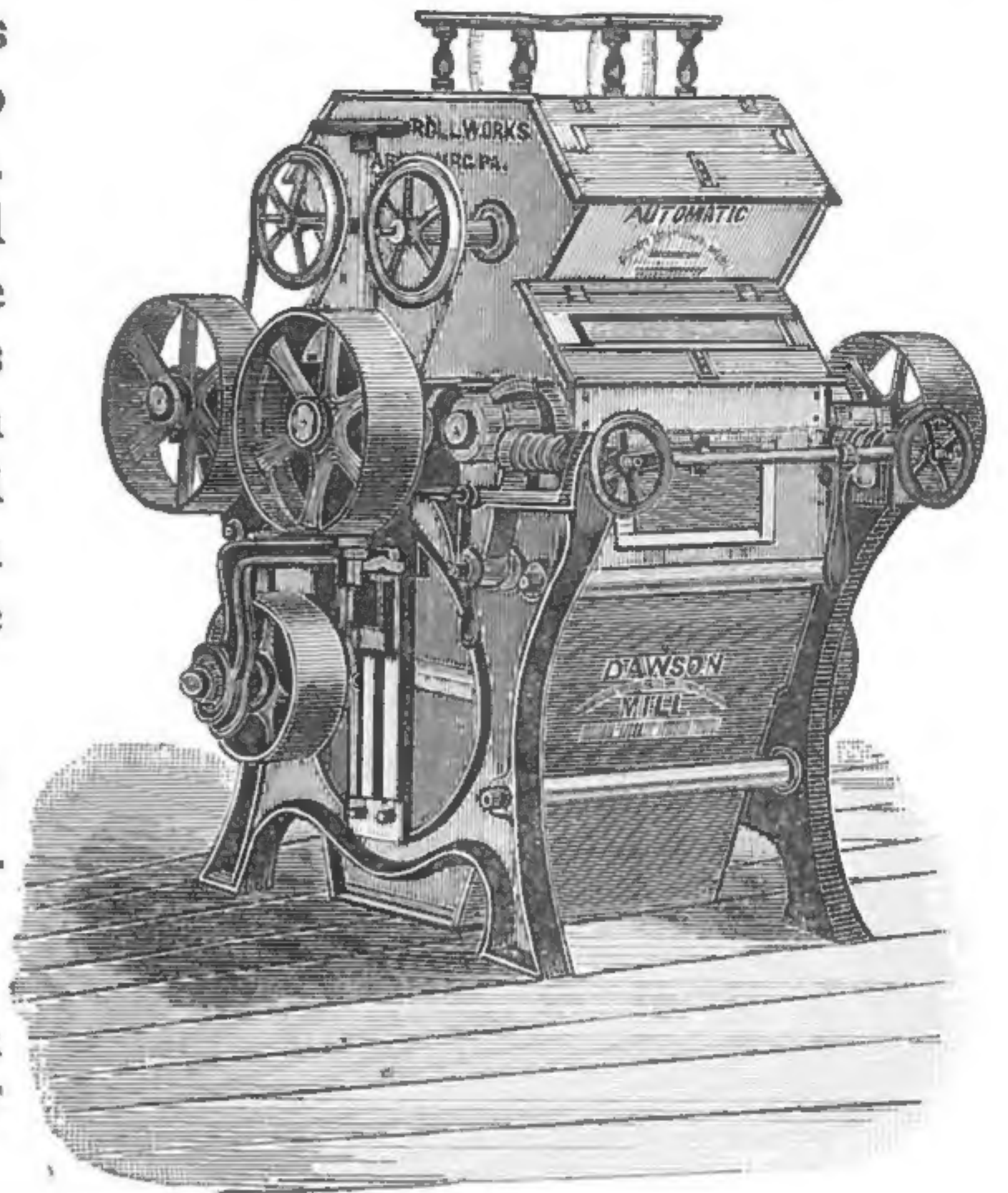
We have a large plant to Re-grind and Re-Corrugate Rolls.

Owing to our late increased facilities and central location we are enabled to ship goods promptly on the shortest notice.

PARTIES CONTEMPLATING REMODELING THEIR MILLS OR BUYING ANY ROLLER MACHINES ARE REQUESTED TO PUT THEMSELVES IN CORRESPONDENCE WITH US.

FOR PRICE LISTS AND CIRCULARS, ADDRESS,

Dawson Roll Works, Harrisburg, Pa.



The Cowles "Reliable" Sectional Wood Pulley

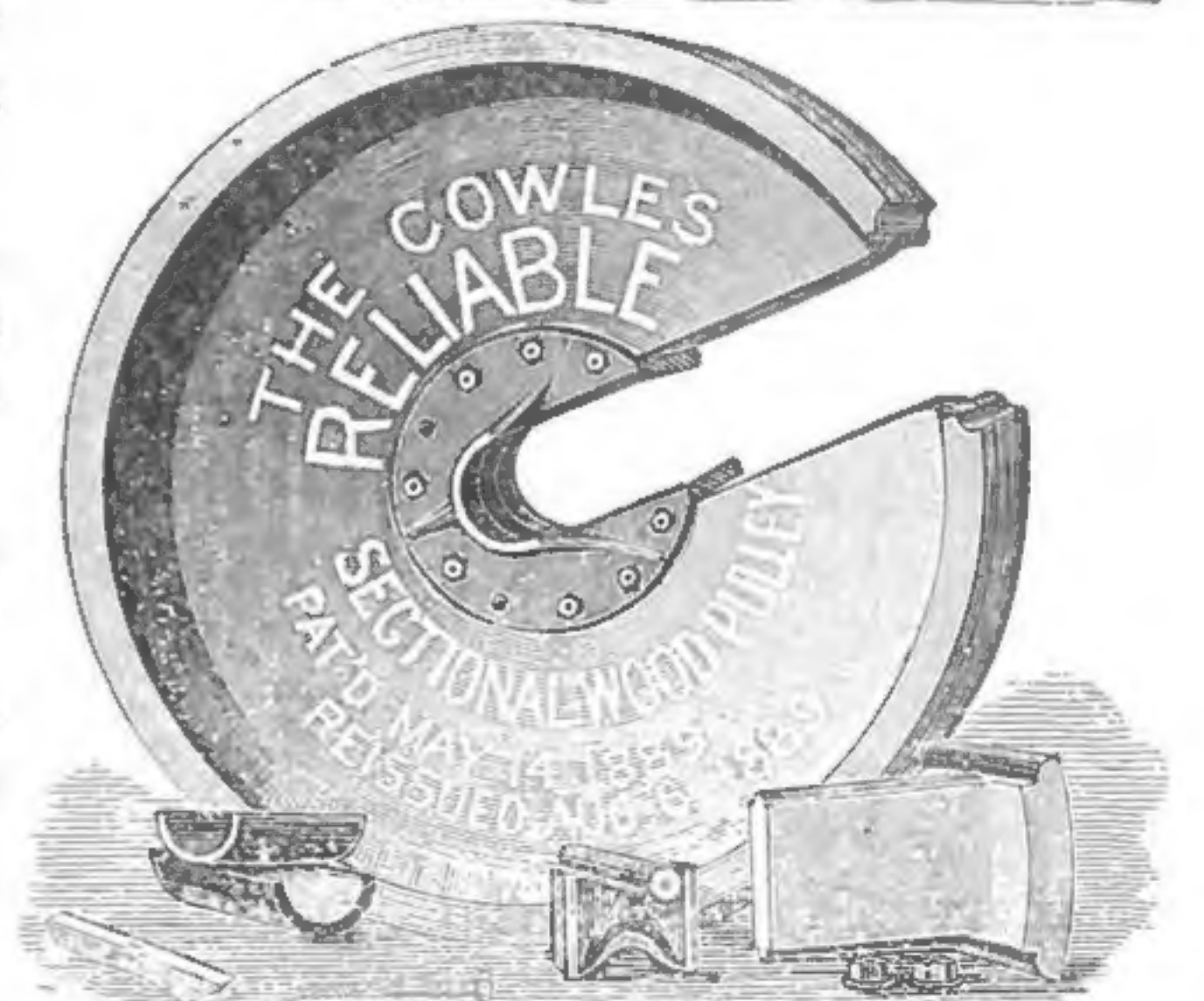
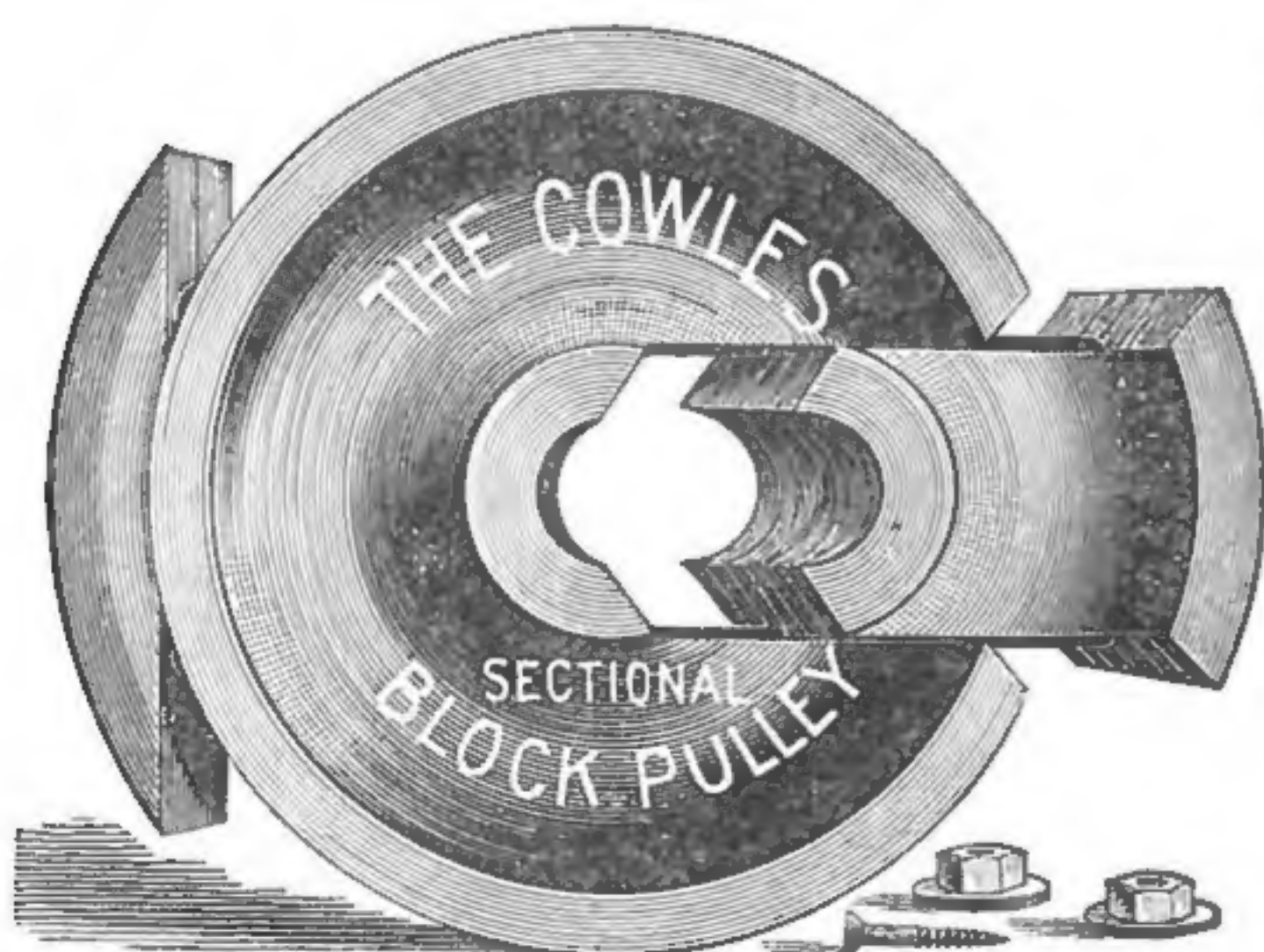
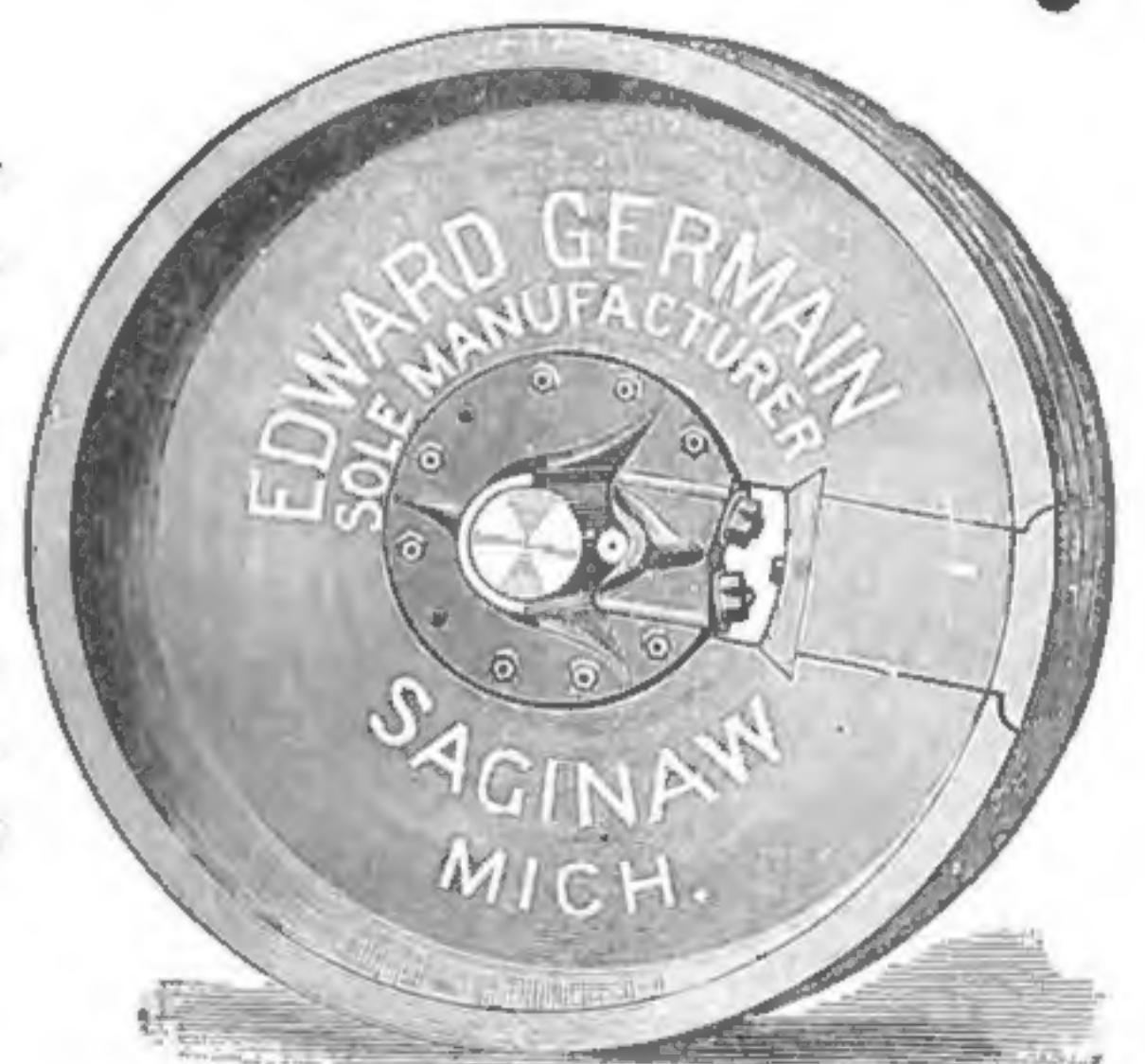


Web made of several layers glued together with grain crossing, and faced up on both sides. Iron flanges securely bolted to web. Rim put on after web has been trued up. Web and rim turned on inside and face, making perfect running pulley. Rim supported entire circumference. Positive self-gripping device for securing pulley to shafting, which is self-centering, and can not slip with wear.

A wooden rim pulley transmits from 30 to 50 per cent. more power with same belt than an iron one.

Two-thirds lighter than iron, bearings will wear longer and the expense for lubricant will be less.

Having solid web, there is no air resistance. The "Reliable" can be placed on shaft or position changed in one-fourth the time required with any other pulley.



EDWARD GERMAIN, SOLE MANUFACTURER SAGINAW, MICH., U.S.A.



PUBLISHED EVERY MONDAY. OFFICES: { Corner Pearl and Seneca Streets,
Over Bank of Attica.
McFAUL & NOLAN, - - - PROPRIETORS.
THOMAS McFAUL. JAMES NOLAN.

SUBSCRIPTION.

In the United States and Canada, postage prepaid, \$1.50 Per Year, in advance; remit by Postal Order, Registered Letter, or New York Exchange. Currency in un-registered letter at sender's risk.

To all Foreign Countries embraced in the General Postal Union, \$2.25 Per Year, in advance.

Subscribers can have the mailing address of their paper changed as often as they desire. Send both old and new addresses. Those who fail to receive their papers promptly will please notify at once.

ADVERTISING.

Rates for ordinary advertising made known on application.

Advertisements of Mills for Sale or to Rent; Partners, Help or Situation Wanted, or of a similar character One cent per word each insertion, or where four consecutive insertions are ordered at once, the charge will be Three cents per word. No advertisements taken for less than 25 cents. Cash must accompany all orders for advertisements of this class.

Orders for new advertisements should reach this office on Friday morning to insure immediate insertion. Changes for current advertisements should be sent so as to reach this office on Saturday morning.

EDITOR'S ANNOUNCEMENTS.

Correspondence is invited from millers and millwrights on any subject pertaining to any branch of milling or the grain and flour trade.

Correspondents must give their full name and address, not necessarily for publication, but as a guarantee of good faith.

This paper has no connection with a millfurnishing house and aims to represent the trade without prejudice, fear or favor.

Address all communications

THE MILLING WORLD,
BUFFALO, N. Y.

Entered at the Post Office, at Buffalo, N. Y., as mail matter of second-class.

SITUATIONS WANTED.

Advertisements under this head, 25 cents each insertion for 25 words, and 1 cent for each additional word. Cash with order. Four consecutive insertions will be given for the price of three.

WANTED.

A situation in some flouring or grist mill, by a man who has had good experience with the buhr system. Can furnish best of references. Address, THOMAS H. NICHOLAS, DeRuyter, N. Y. 2225

SPECIAL ADVERTISEMENTS.

Advertisements of Mills for Sale or Rent, Partners Wanted, Machines for Sale or Exchange, etc., etc., cost 1 cent per word, for one insertion, or 8 cents per word for four insertions. No order taken for less than 25 cents for one insertion, or 50 cents for four insertions. Cash must accompany the order. When replies are ordered sent care of this office 10 cents must be added to pay postage.

FOR SALE OR TRADE.

For a good farm, Mill Property in Northern Indiana; has been overhauled within three years, with all new machinery. Good water-power and splendid custom trade; 2½ miles from station. Has three run of stones. Address, "Z," care of THE MILLING WORLD, Buffalo, N. Y. 24

FOR SALE.

Several good second-hand and new turbines of various styles. Second-hand price list and descriptive matter and prices of our new machines sent free. Every one interested in the shortest route to successful milling on rolls or in grinding corn and feed with the least expense of power, should address us before buying.

FLENNIKEN TURBINE CO.,
Dubuque, Iowa.

8tf

FOR SALE.

One-Hundred Barrel Roller Mill, in one of the best winter wheat sections of the country. Wheat brought to the door in wagons, and flour can be shipped in any direction by six railroads and river. Splendid home market, here and in Louisville.

Also a Sixty-Barrel Custom Mill, roller, running full time on custom, and can hardly keep up. Paying well now, but satisfactory reas a for selling. Either or both will be sold cheap. J. M. HAINS, New Albany, Ind. 268

MILL MACHINERY FOR SALE.

One No. 0 Standard Combined Separator, Smutter and Brush Machine; new, best make.

One 20-Inch Under-Runner Portable Mill, French Buhr Stone, capacity 10 to 12 bushels per hour; new, best make.

One 14-Inch Vertical Feed Mill; best make, new, a bargain.

One No. 6 Dustless Separator; new, a bargain.

One No. 1 Full Rigged Combined Dustless Separator; new, a bargain.

Four Corn Cob Crushers, right or left hand, driven from above or below, best make; capacity 40 to 60 bushels per hour.

Three No. 1 Corn Shellers, capacity 200 to 300 bushels per hour; new.

One No. 2 Purifier. New. Best make. A bargain.

One 20-Inch Portable Mill.

One 18-Inch Double Gear Portable Mill.

For particulars address, FRANK SMITH, care of THE MILLING WORLD, Buffalo, N. Y. 5tf

FOR SALE CHEAP.

One 36-In. Iron Frame Portable Mill, French Burr Stone, Used about 2 months.

One 20 In. Vertical Mill, French Burr Stone, Used about 30 days.

Three Pair 42-In. Old Stock Feed Stones.

FOR PARTICULARS ADDRESS,

SAMUEL CAREY, 17 BROADWAY, NEW YORK.

FOR RENT.

Clinton Mills, at Black Rock, Buffalo, for rent on reasonable terms, recently repaired and put in good order. Apply to CHAS. DANIELS, over 311 Main Street, Buffalo, N. Y. 6tf

FOR SALE.

Flour and feed mill, with water power and three run of stones, for sale cheap; also dwelling house and garden. Situated half a mile from depot on New York and New England R. R. For particulars, address, MRS. M. E. DOUGHTY, Green Haven, Dutchess County, New York. 2427

Will the pooled issues of the Consolidated now be unpooled, or will they stick together, promising their purchasers immunity from infringement suits on their own wares?

JUDGE BLODGETT's decision against the Consolidated Roller Mill Company certainly settles whatever doubt remained concerning the Bogus Resolution after the Jackson failure.

THOSE of our cotemporaries, whose lax business methods have caused them to have a painfully acute interest in a recent gigantic financial discombobblement, have our sympathy. The "short" system has come to stay!

SECRETARY BARRY of the "National" ought to tackle the Blodgett decision as a text for vigorous remarks about "patent sharks" and their "rascally schemes." The text is one that opens up as beautifully as a kernel of No. 1 hard, and it is quite as full of meat.

THE Minneapolis "Yahoo" may loudly proclaim that it, of all the milling journals in the land, is absolutely indispensable to the miller, the mill-wright and the mill-furnisher, but its pages do not bear out its claim. It may successfully lie about its circulation, but it can not conceal the growing disfavor in which it is held by milling machinery manufacturers.

VISITORS to the Buffalo convention of the Millers' National Association in June, 1888, will remember the feverish anxiety of the Minneapolis "Yahoo" managers to secure the advertising patronage of George T. Smith for their daily dodger. The present utterances of the "Yahoo" are a singular commentary on that anxiety. Evidently there is a screw loose somewhere.

THE Bogus Resolution people should not forget that their action at Milwaukee did not convince a single individual that they were right. When the "Yahoo" boasts of "routing" somebody, "horse, foot and dragoons," it should remember that only itself and its friends were routed. Not a single disbeliever in the "Yahoo" crowd has been routed. The Milwaukee action only made a bad matter worse for the dishonest actors.

WHEN will our esteemed Kansas City cotemporary learn that all its attempts to placate the Minneapolis "Yahoo" are doomed to failure? Brother Hall, have you never read of the futility of casting pearls before swine? You may as well accept the general belief that the Minneapolis "Yahoo" is so saturated with meanness, conceit and puerility that it is no longer entitled to courteous treatment. It is a comical bladder that will before long burst of its own self-inflation.

RECENT reports from the winter-wheat section of Illinois are not wholly cheerful reading. The majority of farmers report abundant signs of insect pests, the Hessian fly coming to the front in almost every case. Not a single report indicates a crop above the average, and nearly all the statements are coupled with the statement that an average yield is improbable under the present conditions. Many farmers seem to think that the plant has been injured by the open weather. The conditions prevailing in Illinois are doubtless similar to those in the other winter-wheat States, and, even with the best of weather from this time to harvest, it is hardly reasonable to look for an average crop. A severe cold snap, which is within the possibilities for late February and early March, would play havoc with the winter crop.

DEMAGOGIC PROPOSITIONS.

A. B. SALOM.

DISCUSSION fills the air nowadays. Every second man is a full-fledged political economist. Theories, that have puzzled the brightest intellects of all ages, and that have escaped solution by all the experienced men who have discussed them, are now discussed and settled off-hand by every stevedore, every shoemaker, every laborer one meets. All the indefiniteness, all the complexity, all the difficulty that once surrounded great questions are swept away. The demagogic jargon of the groggery sets forth as settled facts and safe propositions curious imaginings and absolutely incendiary theories. Every man seems determined to discuss every subject, and the sole aim of each man or each clique seems to be to learn what some other man or clique is advocating, with the idea of opposing it. It is incessant gabble and palaver on every hand, and each demagogue one meets is simply crazier than the one he met before. In the journals of these noisy reformers there is nothing coherent. In their orations it is the same. They write and rant on every side of every conceivable subject, and those among them who know most of their own theories really know least of what they really propose to do to reform the world.

What are some of the propositions of these demagogues? Stripped of verbal drapery and condensed into concise texts, some of their propositions are decidedly startling. One quack deliberately proposes to destroy poverty, sin, sorrow, sickness and all forms of discomfort by robbing the people who possess more than they can eat, or drink, or wear, or otherwise use, and distributing the surplus among those who have not been able to amass; or who have wantonly squandered all they ever earned or inherited. This quack is a "reverend," and his proposition is to clothe the general government with, first, buccaneering powers, to rob the prudent, the industrious and the intelligent, even murdering them, and, second, almsgiving powers, to bestow the plunder upon the wasteful, the indolent and the ignorant. These monstrous propositions find applauders! Thousands of men and women flock to hear this particular quack proclaim this outrageous doctrine of wholesale robbery and murder. They do not protest against it. They applaud it to the echo. They pay the ranter well for his rant. He is satisfied. They are satisfied. He does not believe himself. They believe him.

Another demagogue, more widely known still, makes an even more insane proposition, which is to concentrate all taxes into a single levy on the land. This demagogue and his followers teach that it is ownership of land, a mortgage on natural resources and opportunities, that causes the thief to steal, the incendiary to fire buildings, the murderer to kill, the drunkard to drink, the gambler to play and the swindler to deceive. They trace every evil, to which the body social and political is heir or victim, directly to the ownership of land and the collection of more than a single tax. In their opinion the government has only to reduce all taxation to that on land, and this terrestrial ball, instead of being the vale of woe it now is under variegated taxation, would at once become a paradise, without sickness or sorrow, privation or labor, want or squalor. Then the gallows would disappear, the prisons would be turned into temples, the workshop would be a palace, the drunkard would become sober, the tramp would join the producers, and all would be happy.

Singularly enough, this second proposition, which is to secure the regeneration of the world and to secure so much good for all concerned, is, like that of the "reverend" quack alluded to, founded on piracy by the government. The single-tax buccaneers propose that the government shall confiscate the existing property in the form of land, "without compensation" to those who are unfortunate enough to have secured, by industry and economy, a portion of it, and shall hold it and parcel it out to citizens. This is the real theory of the single-tax cranks, confiscation of the land by the State. This violent proposition is not accompanied by any thing to show that, under land ownership by the State, the shiftless, the willfully indolent, and the generally worthless individuals will be benefited by it. The single tax would

give the rich or the industrious individual just the same advantage he to-day possesses over the poor and the lazy individual. After the government has pauperized the rich and the industrious and enriched the poor and the indolent, it will be necessary to keep a constant watch over the two classes to prevent the wealth from leaving the hands of the indolent and again settling in the hands of the industrious.

The inequality that makes "classes" in this country inheres in persons, not in institutions. Land confiscation, paternal government, periodical re-confiscation and re-division of wealth, with the usual diversion of murdering the industrious, will not, or can not, eradicate that personal inequality. The demagogues may palaver and deceive, but facts remain unchanged. Robbery and murder by the government are the ideas of insane men. In this land the people are the government, and the proposition of these incendiaries is the bald idea of national suicide.

Demagogues are the same the world over. The line that separates the Marxes from the Pentecosts, the Pentecosts from the Georges, the Georges from the Mosts, is a purely imaginary line. In reality all these irresponsible men and all their followers are preaching one doctrine of confiscation, of murder, of hatred for the industrious and economical, of pretended love for the indolent and the spendthrift, and of ruin for all established things. The most admirable men among these agitators are really those of them who say directly and with savage earnestness just what they mean and wish. The least admirable among them are those who sugar-coat their pill of murder and robbery, of hatred and anarchy, before placing it in the human mouth. The former are really safest, for their violence disgusts the world. The latter are more dangerous, for they aim to lead the world downward by degrees to their own plane of thinking and acting.

Fortunately, the freedom of discussion allowed in this country makes the greatest possible safeguard against the incendiary propositions of these society-annihilators, these wealth-distributors, these order-destroyers. Full publicity makes them ridiculous. Reflection follows their criminal doings, and sane men, temporarily misled by sophistry, are sure to return to reason and forsake the standards of the demagogues. Violence palls upon men who are honestly discontented with the conditions of labor, but who are not yet criminals in thought or act. The weakness of the whole fabric built by the agitators becomes visible whenever a sane mind follows cause to effect. The unmitigated nonsense of the blatant ranters can not be hidden when an intelligent, but misled, follower asks Why? How? When? Where? Until the demagogues have converted the majority of citizens into robbers and murderers, their propositions will remain mere froth on the sea of discussion, incapable of being developed into great tides or currents calculated to carry the human race into a haven of laborless labor, of unearned wealth, of sinlessness and of absolute freedom from disagreeable conditions and vicissitudes.

THE BREAK SCALPER.

J. MURRAY CASE.

V.

The subject of the proper scalping of the break and other coarse material in the mill, whereby the germ and bran are first separated from the starch and gluten of the wheat berry, is one of more importance than millers generally suppose. In fact it is the key that opens the door to successful and economic milling. I say it is the key, because it is the first important process after breaking the wheat, and in view of the fact that the prime object of the successive breaks is to remove the bran and germ from the middlings, it follows that the more perfectly this germ and bran can be removed before an effort is made to make flour, the more efficient will be the general results. The prime thought to be borne in mind should be to get rid of all the bran and germ possible at the head of the mill. Do not let it tag along through every successive step, every roll, every purifier, every bolt, but get all of it to the bran and pollard as soon as possible. If millers will bear this one thought in mind and study their

separations with special reference to it, great improvements may be made in many mills. The loss to millers from permitting large quantities of bran to become intermingled with granular stock and an attempt thus to grind it together is simply fabulous. I believe I am not overstating the importance of this question when I say that I believe that not less than one-fourth of the entire profits in roller-milling have, up to this time, been absorbed by the imperfect separation of the bran and germ from the middlings. This will seem to many a wild statement, but I can take the samples of pollard and a large percentage of inferior flour made at the tail of the mills in some of our largest plants and demonstrate this statement to be mathematically correct.

I do not make this charge as applied to English or European mills only, but it is applicable to all countries. There has not been sufficient attention given to the proper subdivision of the material and programming to study scientifically the relative effect that one number of cloth may have upon a succeeding reduction or separation; but the question has been, "What numbers of cloth will let the material through?" without reference to what kind of a conglomeration it may form with other material when it gets through; and consequently we not unfrequently have middlings and bran and germ united in brotherly love at the very tail of the mill, the middlings, like young chickens, hiding beneath the feathered wing of the bran and the golden plumage of the broad-leaved germ. This is certainly a Christian idea of divine love and protection, but it is not practical applied to milling; it does not protect the miller's pocket-book.

The first effort, therefore, should be to separate the middlings from the bran and germ, and never allow them to become intermingled again. How can this best be done? There is such a variety of ways for handling the break-chop, all of which are successful, and each of which has its especial advantage for especially designed mills of varying capacities, that it would be impracticable to undertake to explain these various systems without special programmes and very elaborate articles. I will therefore only touch upon the leading points as applicable to all mills. One common fault in scalping is to have scalpings of too excessive capacity. The material that should pass the scalper is not unfrequently all bolted out before it reaches half the length of the scalper, and what passes through from there on consists of broken pieces of wheat, much of which is made by the scalper. These broken pieces of wheat find their way to the germ-rolls, where they are flattened, and a majority of that which should be flour is crushed on to the bran instead of being removed. Further attempts are then made by more smooth-roll reductions to get this flour off, and some of it is thus obtained, but always of a very soft, "greasy" quality, which materially injures the general results.

How to make as little as possible of these "stubtails" or broken pieces of wheat, and what to do with them is an important problem. My experience has been that in all mills larger than four-sack plants, where wheats of different qualities are used, the best scalping arrangement is a system of inter-elevator bolts provided with double conveyors, a thing which English engineers have never yet fully appreciated the importance of, so arranged that the millers can "cut off" and send with the tailings of the scalper to the next reduction all that branny material which finds its way into the break-chop at the tail of these reels. At the next reduction these bran-chips will be reduced so that the middlings will pass the meshes and the bran tail over. And if an aspiration, or assorting system, is applied to these tailings, this fine bran will be removed. It will then be found, when the break-chop has been gathered and sent to the separating reel or scalper, that a very much reduced per cent. of bran-chips will be found in it. The remaining bran-chips that tail over the separating reel may be sent to an aspirating leg or purifier and then, in large mills, be reduced on a special roll, 24 cut, and scalped on about 30 wire, which will make a product good enough to go with the break-chop, in which case it is a special reduction and not a return.

The next process would be to purify and roll the germ-middlings. They will be found substantially free from bran,

and consequently but light tailings will pass the scalper, which may be sent to the final roll, and the product from its scalper either dressed separately or, which in most cases is preferable, sent into the break-chop reel, as such a system simplifies the operations, and the stock, being of a very high order, it brings up the break flour to a much higher standard. We thus have all the products in the mill, except that from the bran-rolls, centralized and substantially free from bran and germ; consequently the subsequent operations are not so difficult. It is true, however, that there will still remain a quantity of fine bran which the purifiers will not wholly remove, and the separations should be so made as to tail off this bran and pollard at every point possible, and under no circumstances let it again become intermingled with the second middlings, which is a common fault. By following this process the flour will be granular and free from that woody, woolly substance which we find sometimes in the very middle of the mill, and which increases as we go down. There is no reason why the flour from the last reel preceding the low-grade reel should not maintain its granular qualities and comparatively high commercial standard, and it will, when these perfect separations are carried out.

In relation to the best class of machines to be used for scalping, every miller will be his own judge. There is a great variety of machines for that purpose. The "rotary scalper" is very prominent just now. It has the advantage of being a cheap machine to make, and has a large capacity, but I fear that the rubbing action on the middlings is too severe and the mechanical motion faulty. The whirling of the stock around and rubbing on the sieve forms a sort of automatic cleaner, but not a perfect one; consequently it is liable to fill up and to tail over rich product. It is not a new device, for it has been used in America for a century or more for sifting corn-meal, for which purpose it is well adapted. The reciprocating riddle, with long stroke to cause the stock to turn over, is, perhaps, a preferable device, as there is less wear on the material, but it should have a cleaner for the cloth, as the tumbling action is not sufficient to keep the meshes open. The vertical shaking riddle accomplishes the work fairly well and does not wear the stock so much, but it bolts through more long bran-cuttings, as by the tossing action more of them come endwise to the cloth. It also must have a cleaner, or tail over rich material sometimes. The common round-reel scalper is limited in capacity, because the material rolls in a sort of hoof fashion and the center of the mass does not reach the surface, consequently it is liable to tail over rich unless of excessive length. The ordinary hexagon reel has held its ground well and probably would continue to do so against any of the machines above mentioned, except in small mills, where one shaking riddle may be made to do the work of all the breaks by simply dividing it into sections. The hexagon has the disadvantage of lifting and dropping the stock through a considerable space, which operates to produce and force through the meshes broken pieces of wheat.

The inter-elevator bolt, in my opinion, embodies the nearest approach to a perfect scalper on all classes of stock that has been thus far developed. It is somewhat more expensive than either of the above described machines, but the difference in cost in a large mill, in my opinion, would soon be saved. The special advantage of this machine is that the material is delivered upon the cloth in a thin spray on both sides of the machine, and consequently has no weight behind it or over it, as in a rotary scalper, to increase the pressure and consequent flouring of the stock. It has double the capacity of the hexagon reel, and thus may be made very much shorter, holding the stock for a less time and consequently less wear upon it. It has the same advantage for dusting middlings. I may say further for it, that, being a slow, rotary-motioned reel, and also provided with a brush cleaner, it therefore requires no attention. In all machines where a given result can be accomplished as well by a revolving motion as by any other, the true mechanic will seek that motion, as the mechanical forces are thus balanced. When the Lord set the universe to whirling, he spun this world upon an axle, and while he did give to each a compound ro-

tary action, he so balanced the centrifugal forces that there is no "giggle" among the stars. And so in mechanics; we will find those machines most serviceable and giving the least trouble which approach nearest to perfect balance of action.—*London "Millers' Gazette."*

ENGLISH MILLING LAST YEAR.

Summing up the results of the past year in the flour and grain trade in Great Britain, the *London "Millers' Gazette"* says: First of all, as regard prices, the year can not be called in any way satisfactory. The previous year closed with plenty of confidence, an element which had been almost entirely lacking for some years previously, and a well based confidence, moreover, for the world's wheat crop of 1888 had been about 15,000,000 quarters below that of 1887, the deficiency in France and America alone being 12,000,000 quarters. Russia, however, was equal to the occasion, having reaped a very prolific harvest, and during the year 1888 sent away 13,500,000 quarters, against 8,540,000 quarters in 1887. In the year just closing, however, the total has fallen to 11,500,000 quarters. Russian wheat, however, may be credited with having again prevented a high range of prices this year, for right along from January to May prices dropped, reaching the lowest point in that month; the decline on Californian wheat, for instance, between January 1 and May 15, was nearly 6s. per quarter. Millers, therefore, had rather a bad time in these months, and almost throughout the summer, owing to the glowing crop reports at home and in France and America, trade was very stagnant. A move upward began at the close of June, and by the end of July values had improved 3s. 6d. to 4s. per quarter, owing to the serious shortage in Russia and Hungary and the less favorable reports concerning the English and American crops. September witnessed a further slight decline, but the last three months of the year were marked by uniform firmness of values and a gradual improvement.

Altogether millers during 1889 have not been overwhelmed with competition in the shape of foreign flour, the first nine months of the year being in fact a period of comparative immunity from American flour, the raw material in America being inflated by speculative action to such an extent as to render competition in point of price with the British millers impossible; the latter, moreover, had a continued and plentiful supply of relatively cheap Russian wheats, which, with their improved methods of cleaning, they were able to turn to the best account; the year has, indeed, like the previous one, been a year of Russian wheat. The year's imports of wheat and flour have been rather less than in the previous one, but the supply of home-grown wheat has been larger, so that the total supply exceeds that of the two previous years, as the following table shows:

	Foreign Wheat. Quarters.	Fl'r as Wt. Quarters.	Total. Quarters.	Proportion of Flour to Whole.
1889....	13,675,000	4,750,000	18,425,000	25 per cent.
1888....	13,352,000	5,443,200	18,795,200	29 "
1887....	12,016,420	5,811,318	18,827,738	31 "
1886....	11,061,000	4,264,000	15,325,000	27 "
1885....	14,340,000	5,016,000	19,356,000	25 "

Of English wheat the estimated supply in each year was as follows:

	English Wheat. Quarters.	Total English & Foreign. Quarters.
1889.....	8,150,000	26,575,000
1888.....	7,500,000	26,295,000
1887.....	7,750,000	26,577,000
1886.....	8,250,000	23,575,000
1885.....	8,250,000	27,606,000

MILLING PATENTS.

Among the patents issued February 11, 1890, are the following:

Oscar D. McDaniel, Ridgway, Ill., No. 421,421, a grain measure and tally.

Chas. H. Cooley, Hartford, Conn., No. 421,556, an automatic regulator for grain-scales, containing the combination, with the grain-weigher frame-work and with the supply-chute thereof, of the regulator-valve laterally movable to close said chute, the counterweighted regulator-hopper supported to have a rising and falling movement and connected to actuate said valve, said hopper having therein the con-

tinuously-open outlet, the fixed receiving-conduit below and substantially in vertical alignment with said outlet, and the longitudinally-collapsible connecting-pipe joined to the hopper around its said outlet and joining the upper end of said fixed conduit, all organized and coacting, when the grain is at rest in said conduit, to cause a reactionary movement of grain from the connecting-pipe into the hopper on the downward movement of the hopper.

Thomas C. Cadwgan, Springfield, O., No. 421,481, a crushing and grinding mill, containing a plurality of crushers mounted upon a shaft leading to the grinding devices, said crushers having crushing and conveying flanges increasing in number in the respective crushers as the latter approach the grinding devices, whereby the capacity of said crushers is increased in like ratio with the increased number of said flanges.

Henry Bowman, St. Joseph, Mo., No. 421,658, a roller grinding-mill, containing the combination of two rolls arranged in bearings, one of which is made movable to and from the other, a spring and adjusting devices located below the rolls for transmitting a regulated pressure to the rolls for a grinding set, and another spring and adjusting device arranged above the rolls to antagonize the first spring and to separate at will the rolls without disturbing their grinding-adjustment.

James E. Welch, Petersburg, Ill., No. 421,796, a wheat-heater, containing the combination, with the steam cylinders having the upwardly-extending ribs and an inclosing steam-coil fitting around said cylinders and ribs, of the chamber between said cylinders, and the steam-pipe discharging into said chamber above the lower cylinder.

Wells T. Barker, Nashville, Mich., No. 421,850, an automatic grain-weighing machine, containing the combination with a vertical spout divided into two sections, the lower section provided with a bridge making a double opening at the mouth, paired gates arranged one upon each side of said spout, adopted alternately to penetrate and withdraw from said spout, having their upper ends pivoted to a suitable oscillating frame pivoted to said spout, said machine having buckets arranged one upon each side of said spout and provided with suitable means of emptying said buckets and operating said oscillating frame.

Jacob Struble, Sioux City, Ia., No. 421,875, a grain-meter, containing the combination of the tilting receptacle having a bottom, sides, and a central partition, a sliding weight applied to said receptacle centrally of said partition, the cleats secured to said receptacle and between which said weight is held, and the screw for adjusting said weight.

SOME TYPICAL FLOURS.

Professor William Jago, the well-known English chemist, in one of his recent Cantor Lectures before the Society of Arts, gave the following interesting showing of the characteristics of the typical flours used in Great Britain: Spring American patent, contains 12.6 per cent. moisture and 13.42 per cent. dry gluten, and absorbs 71 quarts of water per sack of 280 pounds. These are hard dry flours, containing a high proportion of very elastic gluten, which only slowly softens during fermentation. Water-absorbing power high; color good, but white, with comparatively little yellow or bloom in the bread. Loaf very bold and of good texture; crust yellow without foxiness; will bear very hot oven. Bread tends somewhat rapidly to become hard and dry and is comparatively flavorless. A doughing flour, but it may be used in rapid sponges, or one-third in long sponges.

Spring American bakers', contains 13.16 per cent. moisture and 14.64 per cent. dry gluten, and absorbs 73 quarts of water per sack 280 pounds. This is also hard and dry, higher proportion of gluten, but usually somewhat less elastic; softens very slowly. Water absorbed rather higher than with the patent; color dark and greyish, varies with different brands. Loaf bold but textureless, crust very foxy, catches readily in the oven. Bread harsh and dry; has, with samples of specially low grade, a strong, beany flavor. Straights and bakers' grades are good sponging flours, not good doughing flours.

Canadian hard Fyfe wheat patent, contains 12.9 per cent. moisture and 10.8 per cent. dry gluten, absorbs 82 quarts of water per sack of 280 pounds. This flour has very much the same characteristics as the spring American patent, but has remarkably high water-absorbing capacity. A sponging and doughing flour, but neither straights nor bakers' grades from this wheat are good doughing flours.

Winter American patent, contains 11.66 per cent. moisture and 8.26 per cent. dry gluten, and absorbs 65 quarts of water per sack of 280 pounds. These are comparatively soft flours, containing a moderate proportion of gluten, which softens more rapidly during fermentation than the preceding, but still is fairly tough and elastic. Absorbs medium quantity of water. Color is very good, white and more bloomy than the spring American. Makes a very good loaf by itself, quite of medium size, and fair texture. Good yellow crust without foxiness. Bread fairly moist and pleasant in flavor. Doughing flours all grades, but may be used for rapid sponges taken on the first turn.

Winter American bakers', contains 11.73 per cent. moisture and 10.1 per cent. dry gluten, and absorbs 69 quarts of water per sack. These are similar on the whole to the patents in general properties. Some brands make doughs with little elasticity, but which hold up well and do not give during fermentation. Loaf not up to medium size, low, and with rather a tendency to run. Much less foxy crust than spring American of about same grade, also better color in crumb. Flavor moderate, and usually devoid of any harshness. Bread sometimes clammy.

California straight grade, contains 12.1 per cent. moisture and 7.13 per cent. dry gluten, and absorbs 64 quarts of water per sack. These are usually weak, dry flours, with comparatively little gluten. They are of good color, full yellow, and sweet in flavor.

Kubanka, Russian, contains 10.9 per cent. moisture and 16.06 per cent. dry gluten. This is a hard dry flour, with unusually high percentage of gluten; makes a big loaf. Color very yellow, almost pea shade; bakes very foxy. Bread very harsh and coarse in flavor. Sponging—long sponges—not good doughing flour.

Azima, Russian, straight grade, contains 12.36 per cent. moisture and 12.7 per cent. dry gluten, and absorbs 71.5 quarts of water per sack. These are hard flours, with good percentage of gluten, but soften more readily during fermentation than spring American grades, for which these flours make useful substitutes. Color of patents good; rather more tendency to foxiness than the American. Loaf bold, but if the dough is permitted to lie, frequently shows tendency to run. Bread comparatively flavorless; in lower grades coarse in flavor. Sponging flours; the patent grade may be used, one-third in sponge, and one-third in dough.

Hungarian best patent, contains 10.82 per cent. moisture and 10.48 per cent. dry gluten, and absorbs 76 quarts of water per sack. These are dry and comparatively soft flours; only medium percentage of gluten, which is very soft but elastic. Water-absorbing power remarkably high; color white, with a most delicate shade of bloomy yellow. Loaf not very large, but of peculiar silky texture; crust yellow, without foxiness. Bread moist and of exquisitely delicate flavor. Doughing flours, but may be used in rapid sponges taken on the first turn.

Hungarian lower-class patents, contain 10.98 per cent. moisture and 9.23 per cent. dry gluten, and absorb 74.5 quarts of water per sack. These are flours with less gluten and lower water-absorbing power than the higher class patents.

Color very good, but usually full yellow. Bread moist, and somewhat liable to be clammy.

No. 2 Calcutta, Indian, contains 12.6 per cent. moisture and 9.68 per cent. dry gluten, and absorb 71.5 quarts of water per sack. These Indian flours generally are hard flours of a ricy character. Their gluten is low in amount, and usually very deficient in elasticity. The quantity of water absorbed is high. Color is low, except with very great milling precautions. Loaf is small and runny, and devoid of texture, and foxy. Bread is harsh and beany in flavor.

Old white English wheat flour, contains 14 per cent. moisture and 9.82 per cent. dry gluten, and absorbs 62 quarts of water per sack. The flours from English wheats are usually soft and damp. Vary considerable with change of climate and locality. Proportion of gluten low and devoid of much elasticity. Water-absorbing power low. Patent flours are of very good color and bloomy; bakers' grades dark and gray. Loaf small and compact; crust of better class of flours free from foxiness. Bread is moist, and has a very sweet nutty flavor. Doughing flours all grades; may be used alone doughing direct.

Flours from kiln-dried Scotch wheat, contain 13.8 per cent. moisture and 7.94 per cent. dry gluten, and absorb 63 quarts of water per sack. These Scotch flours are even moister and softer than those from English wheats. Like them, they are low in gluten and water-absorbing capacity. Loaf is small, bread moist, and flavor pleasant. Doughing flours all grades; may be used alone, doughing direct.

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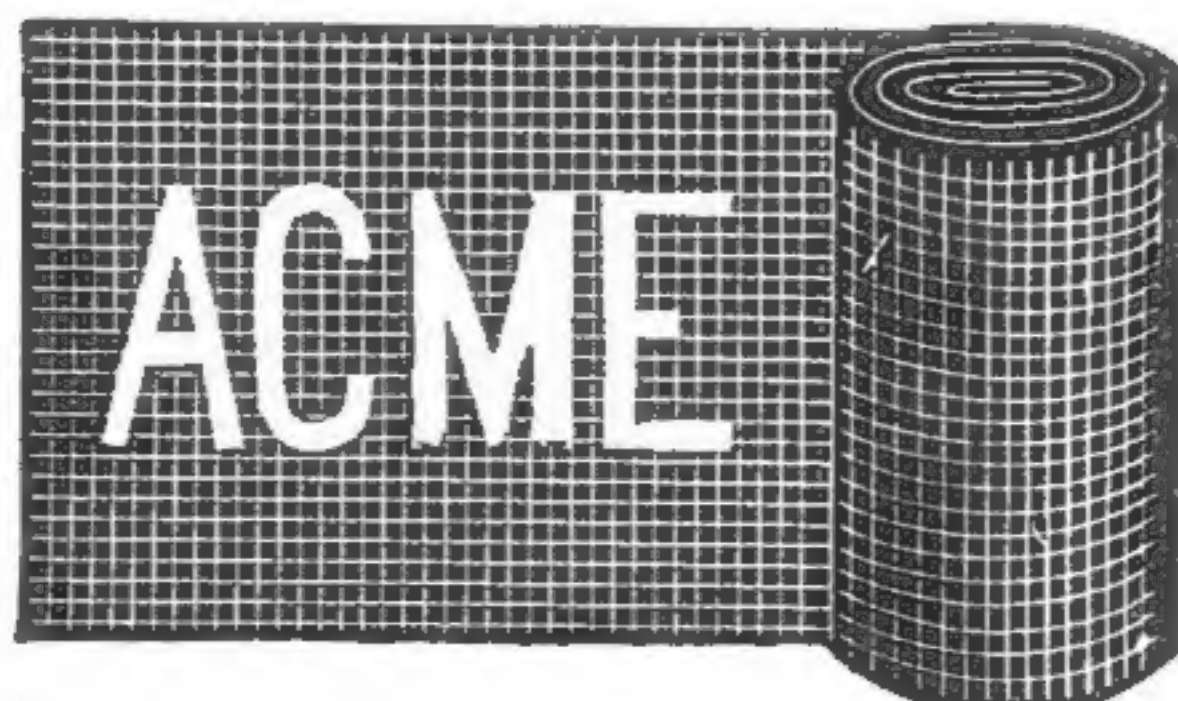
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GENERAL NOTES.

HENRY HALL, inspector of mines for Great Britain, estimates the available quantity of coal in Great Britain at 90,207,000,000 tons. That is the quantity estimated at less depths than 4,000 feet, allowing any additional quantity that may be got from under the red rock to stand as a set-off against that which may be found impracticable on approaching 4,000 feet. On this data, if we add 3,000,000 tons to each future year's production, this being the average increase since 1854 up to 1888, we get a life of 192 years. But the increase over the ten years previous to 1889 is 4,000,000 tons, and assuming that the future increase will be equal to this, we get a duration of 174 years.

A RECENT report says: An option has been given on the mills of the Merrill Milling Company, of Kalamazoo, Mich., to an English syndicate which is trying to secure control of the twelve large mills along the Michigan Central Road between Kalamazoo and Detroit. The Merrill Mills cost \$100,000, and three of them are located in Kalamazoo and one at Plainwell. D. B. Merrill will remain manager. No offer has been made for the mills in Grand Rapids, but as the Michigan Central has a branch running to that city, it is possible that the syndicate may attempt to secure the mills there.

POINTS IN MILLING.

EVERYWHERE I find evidence enough to convince the most doubting of all doubting Thomases that the modern American milling system is essentially a "short" system. During 1889 I visited nearly a hundred new flouring-mills, and my memorandum book records the fact that nearly every one of them is essentially a "short-system" mill. Beside that, I visited hundreds of others that have been changed from "long" to "short," or from buhr to short roll outfits. The long-system mills no longer claim the majority in numbers nor the unchallenged superiority of product.

MILLERS have come to understand more thoroughly the meaning of each "break" and its relation to the quality and the quantity of the yield. They understand the importance of putting more work on the cleaning of their wheat before sending it to the rolls. They have experimented with less and less breaks. They have been more careful at every step. They have learned to keep their rolls and other machinery in perfect condition. The result is success on a system that, two or three years ago, was denounced hotly and unscientifically by its old-fogy opponents.

It has always been a mystery to me why the "long" millers should so bitterly oppose and denounce short milling. If the short millers turned out flour so poor that it could not compete with that of the long millers, it would seem that the long millers ought to be delighted to see the short millers going on a wrong tack. If the short system bankrupted its operators, so much better for the long men. Yet the longs have been very earnest in trying to win the shorts from the supposed evil of their way! It is a curious phase of human nature. Is its basis pure prejudice or pure ignorance?

WHY is it that a miller will never believe that flour-dust is dangerously explosive until he has been injured by an ex-

plosion? I know a score of men who have caused small explosions by sticking naked lights in dusty spaces. Most of them bear the marks of their experience in facial scars, and some of them have had to go through the fool operation more than once to become convinced that flour-dust is quite as dangerous as gunpowder or dynamite. There are scores of unrecorded explosions of this kind. Insurance men and other interested persons would be surprised to learn the frequency of dust explosions in flour-mills on a small scale. The world hears about the large and disastrous ones only.

GERMAN MILLING POETRY.

MUELLERS LENCHEN.

Im Thale steht ein Muehlchen,
Man kann es heut' noch seh'n,
Dort wohnt des Muellers Lenchen,
Die war so jung und schoen.

Und dieses schoene Maedchen,
Das war mir auch bekannt,
Die liebte einen Juengling
Mit Namen Ferdinand.

Der muszt' im Preuszenlande
Drei Jahr' zum Militaer;
Dort sah er eine And're,
Dacht' Lenchen's nimmermehr.

Die Pflicht war bald vergessen
Trotz Treue, Lieb' und Schwur;
Er suchte bei der Andern
Das schoene Geld ja nur.

Drei Jahre sind verflossen
Und Stund' um Stund' verrinnt,
Es steht an seinem Fenster
Das schoene Muellerskind.

Der Liebste muz doch kehren,
Musz heut zu mir zurueck!—
Der blieb im Preuszenlande,
Doch fand er nie das Glueck.

Schoen Lenchen ist verlassen,
Die einst so gluecklich war;
Ach, ihre Wangen blassen
Und bleich wird auch das Haar.

Franz Mueller in "Deutscher Mueller."

LITERAL TRANSMOGRIFICATION.

MILLER'S LENCHEN.

In the valley stands a millkin,
One can it to-day still see,
There lived of the miller's Lenchen,
Who was so young and beautiful.

And this beautiful maidkin,
That was to me also bekown,
She loved a youngling
With name Ferdinand.

He must in the Pussian land
Three years to the military;
There saw he another,
Thought of Lenchen nevermore.

And duty was soon forgotten,
Spite faith, love and oath;
He sought by the other
The base money yes only.

Three years are flown
And hour at hour elapses,
It stands on her window
The beautiful miller's kid.

"The dearest must now return,
Must to-day to me back!"—
He staid in the Prussian land,
Though found he never the happiness.

Beautiful Lenchen is "left,"
Who once so happy was;
Alas! Her cheeks blow,
And pale becomes also the hair.

COTEMPORARY COMMENT.

Sixty wives and only nineteen children is not a very creditable showing for the Shah of Persia. Some men do better than that with only one or two poor little wives.—*New York "Produce Exchange Reporter."*

There is more or less cost attached to the carrying of wheat for future delivery, though most of it is carried in

houses owned by the carriers, so that the cost is reduced to the minimum. Yet there must be a calculation for interest, and certainly for insurance, to say nothing of the expense of storage, which is presumed to be owned by the party himself. If he can sell his wheat for spot delivery at as

much as he can get for it by holding it until next May, saving to himself these expenses, whatever they may be, there is an object to be obtained in dropping the wheat now, not only saving thereby the costs but the anxiety relating to the outcome of it.—*Minneapolis "Market Record."*

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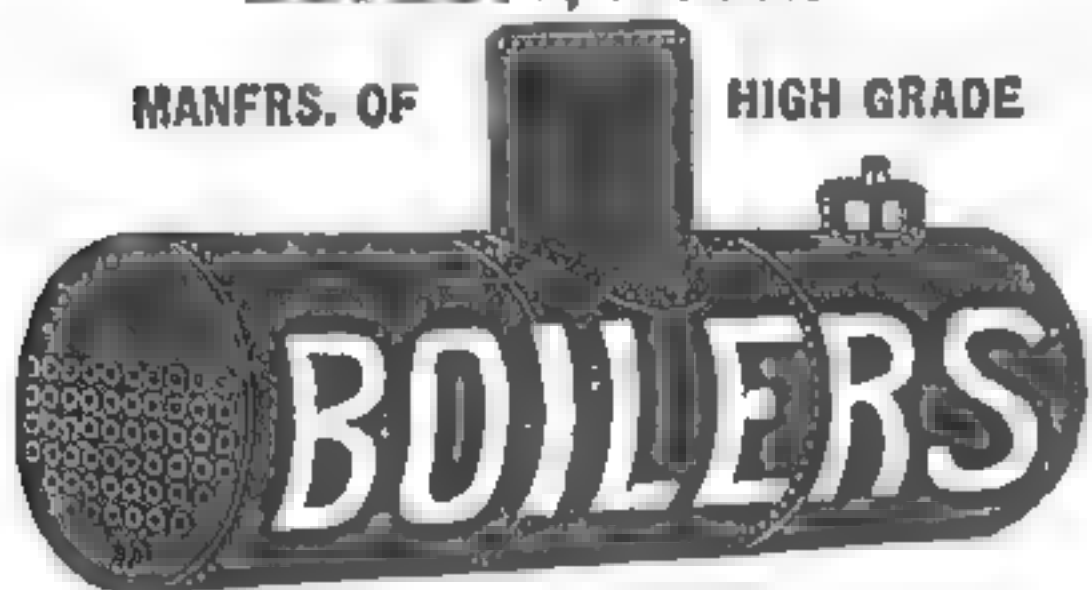
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THE BEST AND CHEAPEST CORN AND COB CRUSHER IN THE WORLD.

All wearing parts cast of a steel mixture. Notice difference in construction. Most area where most work is done, where all other crushers have least area where most work is done. Low priced machinery is not the cheapest, considering durability and efficiency. Sent on 30 days' trial when satisfactory reference is furnished.

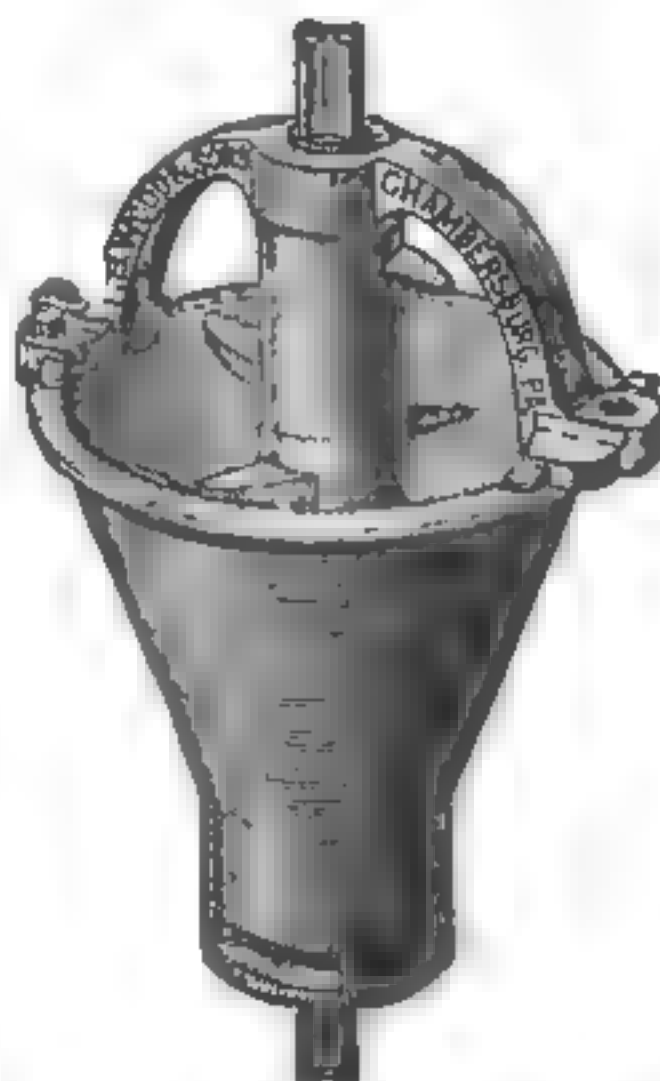
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WILL BUY THE BEST AND CHEAPEST
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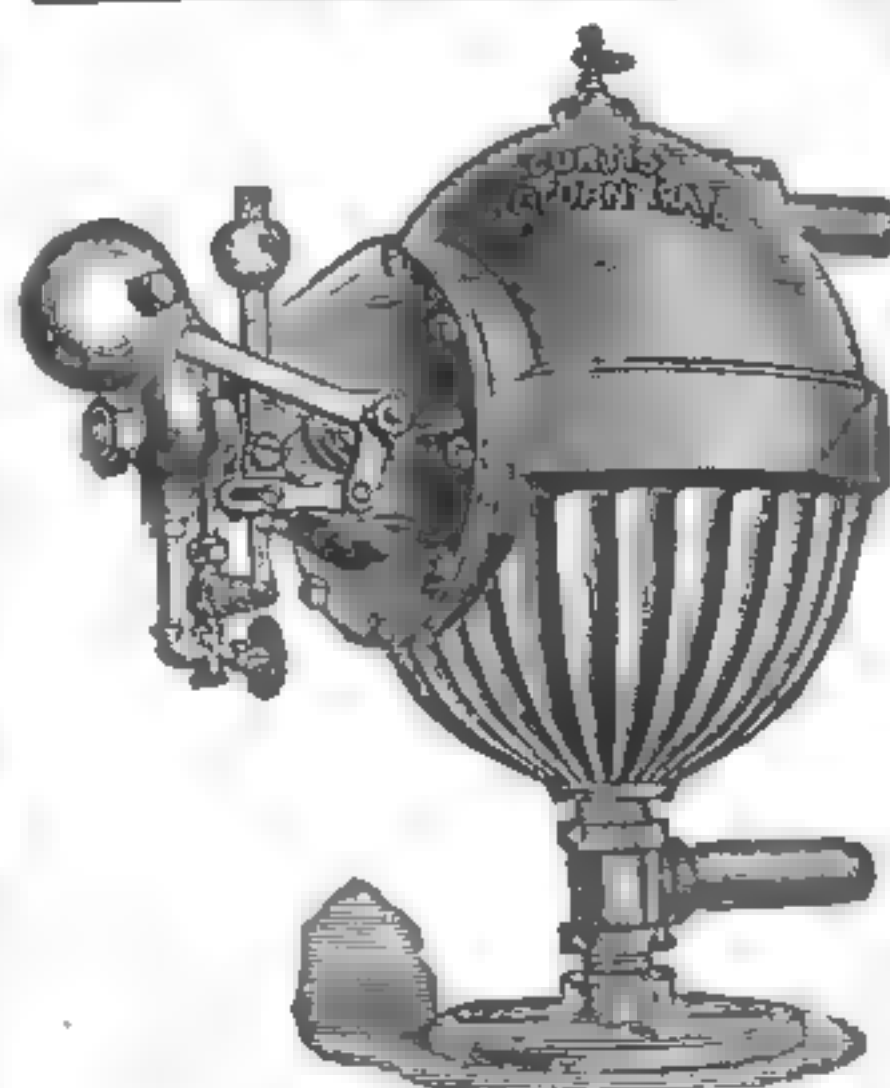
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Our crushers are made of a "special quality" of material that insures years of service. Thousands of these crushers are in use throughout the United States and Canada. Send for circular, giving testimonials from millers who are using them, and know a good thing when they see it.

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Manufacturers of
Shafting, Pulleys, Hangers, Mill Gearing, Etc.



THE CURTIS

PATENT RETURN STEAM TRAP.

It is noiseless, positive, rapid, will return all condensation back into the boiler, and works equally well in connection with reduced pressure or exhaust steam, also when the return is below the water line of the boiler.

THE CURTIS REGULATOR COMPANY,
NO. 74 BEVERLY ST., BOSTON, MASS.

GENERAL AGENCIES.

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The Canton Cabinet Filing Case Company, Canton, Ohio.

MANUFACTURERS OF

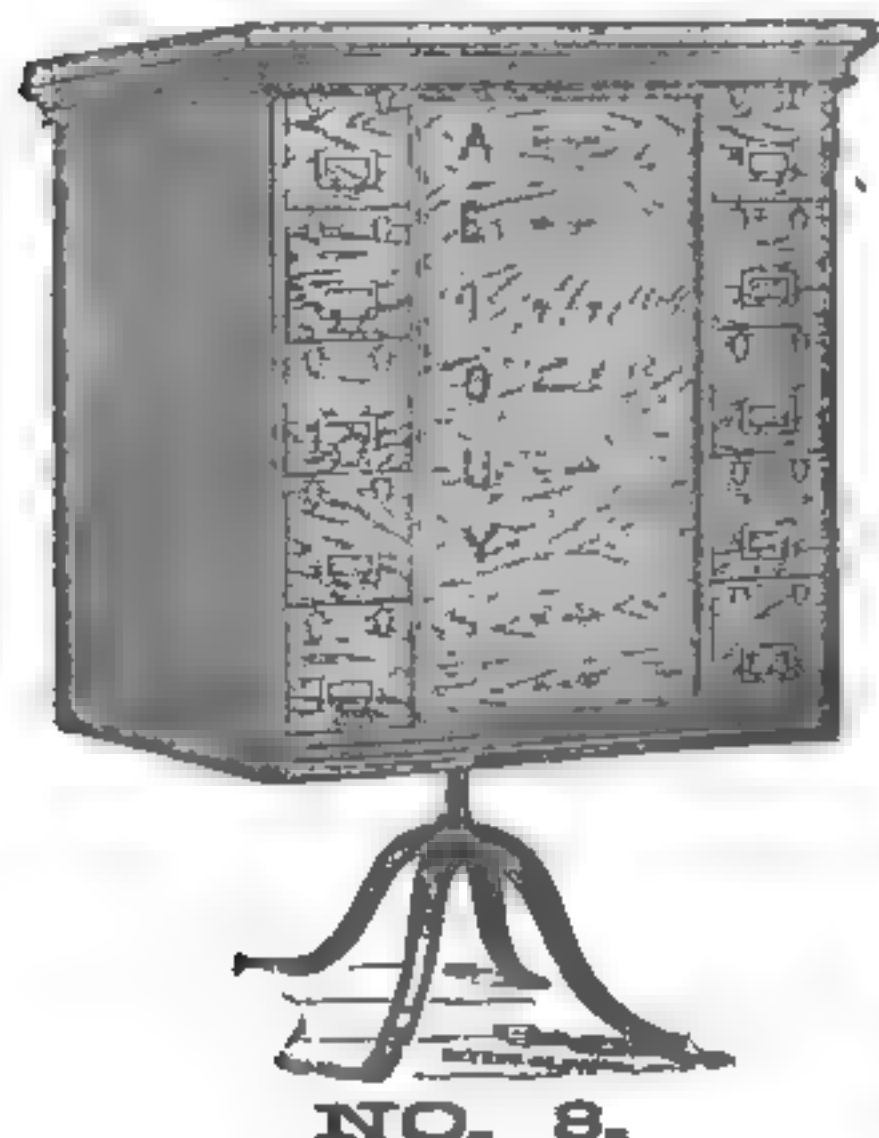
The New Buckeye Document Case & Letter File; Also All Kinds Office Furniture

NO. 8 Represents one side of one of our Revolving Cabinet Letter Files and Document Cases Combined. It contains 80 Document Drawers and 8 Letter File Drawers. In filing letters we use first VOWEL of name on front of drawer, and LETTER FOLLOWING first VOWEL on Index Sheet within drawer. We also make more exhaustive systems which contain from 6 to 100 or more Filing Drawers.

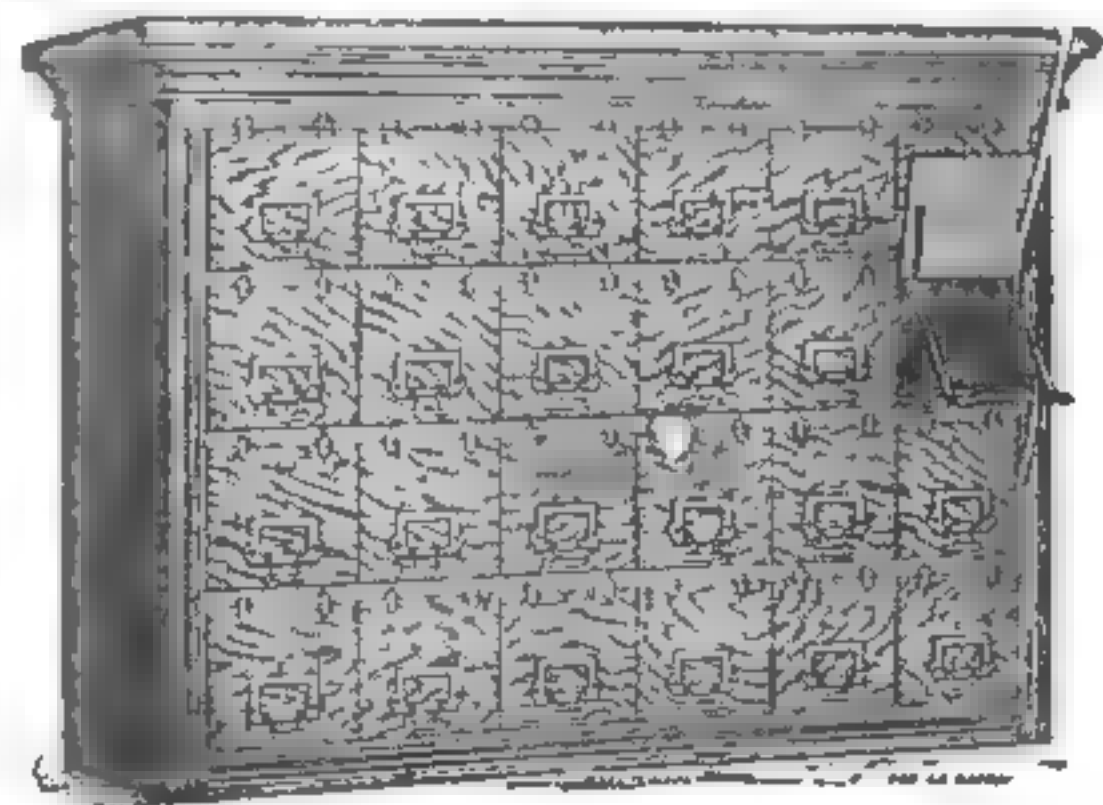
NO. 1 Represents one of our small Document Cabinets, for use on desks or brackets. Action of drawer can be seen in the cut. When front is raised inner drawer comes forward, exposing contents of drawer for inspection.

Our Cabinet Files are conceded to be the Most Convenient of Any in the Market. They are Compact, Simple, Complete, Durable and Ornamental.

SEND FOR PRICE LIST AND CATALOGUE.



NO. 8.



NO. 1.

NOTES & NEWS

A. Hinson, Troy, Ala., builds a grist-mill.
 Romney, W. Va., men project a roller mill.
 Charleston, Tenn., men project a flour-mill.
 Messrs. Rhyne, Jasper, Ga., build a grist-mill.
 M. W. Ruark, Westover, Md., refits flour-mill.
 J. S. Bloxton, Falmouth, Va., built a grist-mill.
 G. W. Russell, Dot, Ky., will build a flour-mill.
 J. V. Edge, Downingtown, Pa., remodels his mill.
 E. M. Loovorn's grist-mill, Bowdon, Ga., burned.
 A. Hook, Capon Bridge, W. Va., remodels to rolls.
 G. N. Buchanan, Luverne, Ala., builds a grist-mill.
 J. W. Eison, Grindall, S. C., rebuilds his grist-mill.
 Brophy & Brown, Victoria, Tenn., start a grist-mill.
 W. D. Hughes, Keedysville, Md., improves flour-mill.
 J. Kester, Ringtown, Pa., builds a 50-barrel roller flouring-mill.
 Higgins Bros., Three Bridges, N. J., build a 50-barrel flour-mill.
 J. W. Detmore, Western, Va., builds a 50-barrel roller flouring-mill.
 G. N. Alpaugh, Cokesbury, N. J., builds a 35-barrel roller flouring-mill.
 J. H. Counts, Columbia, S. C., builds a grist-mill at Irmo, a new town.
 B. C. Hatfield, Wagontown, Pa., builds a roller flouring and feed mill.
 Bowker & Son, Boston Neck, Suffield, Conn., will build a steam grist-mill.
 Darby & Garrett, Weavertown, Md., build a 125-barrel roller flouring-mill.
 F. H. Darby, Williamsport, Md., is building a 60-barrel roller flouring-mill.
 Steiner Bros., Jefferson, Md., want machinery outfit for a new flouring-mill.
 W. H. C. Kemp, Williamsport, Pa., remodels to rolls with 150-barrel capacity.
 W. J. Epperson's grist-mill, Bronson, Fla., burned with other property; loss \$16,000.
 Lovett & Rogers, Orrville, Ala., rebuild their burned grist-mill; machinery is wanted.
 G. H. Wilson, Rock Cave, W. Va., rebuilds his burned grist-mill; he wants machinery.
 L. Shaw, St. Paul's, N. C., rebuilds his burned grist-mill; he wants an outfit of machinery.
 J. W. Griffith, Greensboro, N. C., organizes a stock company to build a roller flouring-mill.
 Gunn & Ashcroft, Sulphur Spring, Tex., remodel their mill to rolls; machinery is wanted.
 B. F. Crow's flour-mill, Syracuse, Ind., burned; loss \$10,000; insurance \$2,500; fire unexplained.
 J. H. Edwards' grist-mill and other property, Conway, La., burned; loss \$3,800; insurance \$2,000.
 The O'Neill Roller Mills, O'Neill, Neb., burned with the elevator; loss \$50,000; insurance only \$24,000.
 Joseph Harvey, Philadelphia, Pa., is building a 3-story flour-mill, to be called the "Luxury Flour Mills."
 Sturgis, Ky., is offering a bonus to the Wheelers to induce them to build a 200-barrel flouring-mill in that town.
 John R. Manning's grist-mill, Gardnersville, N. Y., burned with other property; loss \$7,000; no insurance; fire mysterious.
 Herrington & Field, Wellsboro, Pa., are building a 35-barrel roller flouring-mill and a roller feed and buckwheat mill. They expect to begin operation the first of April next.
 The Isaac Harter Co., Fostoria, O., offer to spend \$150,000 in remodeling the old Pioneer Flour Mills, Alexandria, Va., in case the property is given to them and they are exempted from taxation.

L. C. Heare, Vernon, Tex., has information about a \$75,000 stock company recently organized to build a flouring-mill and grain-elevator.

At Terre Haute, Ind., Feb. 15, the flouring-mill of the Terre Haute Milling Co., composed of W. L. Kidder & Sons, capacity 600 barrels daily, was burned, causing a loss of \$100,000 on building, machinery, 2,000 barrels of flour, wheat and other stock. Insurance about \$40,000, mostly in the Millers' Mutual companies.

The yield of the various crops in Illinois for 1889 is now so nearly a matter of positive knowledge that an exhibit thereof will be of general interest. The State Board of Agriculture has pretty complete data, and from these is compiled the following exhibit on the principal crops, showing the area cultivated in 1889, the product and the estimated value:

	Acres.	Bushels.	Value.
Wheat.....	2,052,388	37,201,916	\$26,093,250
Oats.....	3,663,936	142,150,811	28,981,664
Corn.....	6,988,267	247,980,589	58,337,040
Potatoes.....	119,632	15,484,300	3,930,177
Rye.....	204,873	8,803,419	1,466,229
Barley.....	40,088	6,207,157	551,994
Hay.....	3,176,281	4,910,544	26,869,871
	16,245,465	447,738,826	\$146,230,234

In this table hay is given in tons and not included in the footing. To this total it is proper to add the May return of fat hogs marketed, 3,067,036 head, valued at \$27,348,904; fat cattle marketed, 551,571 head, valued at \$18,388,190; and fat sheep marketed, 146,675 head, valued at \$517,756, or a total of \$46,254,850. That is, the grain and hay product of the year added to the marketed live stock makes a total estimated value of \$192,394,484. The foregoing takes no account of \$642,735 for the wool product of the year, of \$7,466,110 for milk sold, \$1,352,587 for cream, \$4,175,224 for butter, \$185,778 for cheese (a total of \$13,179,109 for the dairy production of the State for the year) or of \$2,822,859 for the apple crop, \$136,782 for peaches, \$11,746 for pears, \$79,735 for grapes, \$129,685 for other fruits and berries, \$72,811 for the wine product, \$567,053 for broom corn, \$353,883 for sorghum, \$30,415 for buckwheat, \$75,944 for millet, \$434,300 for timothy seed, \$245,695 for clover seed, \$141,180 for castor beans, \$105,059 for tobacco, \$215,646 for sweet potatoes and \$533,950 for turnips and other root crops. These enumerated items amount to \$19,778,678, which, added to the aggregate given above, makes \$212,173,162 as the approximate value of the agricultural and live-stock product of this State for the year.

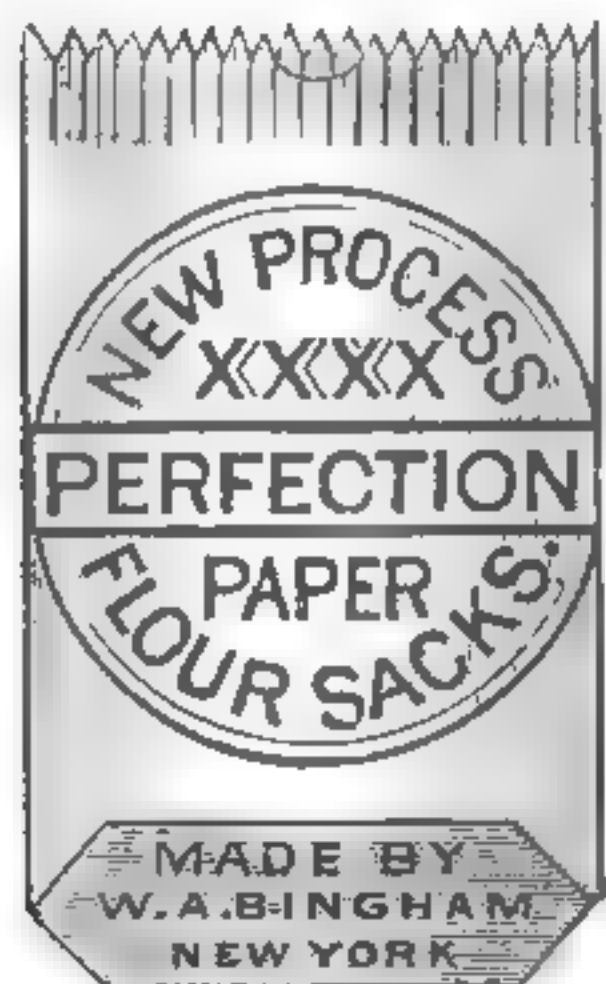
Trift's *Monthly Galaxy of Music* for February, sold at the low rate of 10 cents a copy, or \$1 a year, contains 14 pieces of fine music, 8 vocal and 6 instrumental, whose combined value in sheet form is \$4 90. The songs are by H. P. Danks, A. Wilbur, Lady Scott, J. L. Molloy, H. M. Estabrooke, F. Clay, E. R. Young and S. Adams. The instrumental pieces are by W. T. Keefer, G. Lange, W. J. Watt, H. Fliege, J. Strauss and T. H. Howe. The print is clearer than that of the average sheet music, and the *Galaxy* is a marvel of cheapness and excellence. Address F. Trift, Publisher, 498 Washington street, Boston, Mass.

A NEW METHOD OF TREATING DISEASE.

HOSPITAL REMEDIES.

What are they? There is a new departure in the treatment of disease. It consists in the collection of the specifics used by noted specialists of Europe and America, and bringing them within the reach of all. For instance the treatment pursued by special physicians who treat indigestion, stomach and liver troubles only, was obtained and prepared. The treatment of other physicians, celebrated for curing catarrh was procured, and so on till these incomparable cures now include disease of the lungs, kidneys, female weakness, rheumatism and nervous debility.

This new method of "one remedy for one disease" must appeal to the common sense of all sufferers, many of whom have experienced the ill effects, and thoroughly realize the absurdity of the claims of Patent Medicines which are guaranteed to cure every ill out of a single bottle, and the use of which, as statistics prove, has ruined more stomachs than alcohol. A circular describing these new remedies is sent free on receipt of stamp to pay postage by Hospital Remedy Company, Toronto, Canada, sole proprietors.



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 MANUFACTURER OF
FLOUR SACKS.
 178 Duane Street,
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THE BEST ARE THE CHEAPEST.

MILLERS' FLOUR SACKS A SPECIALTY.

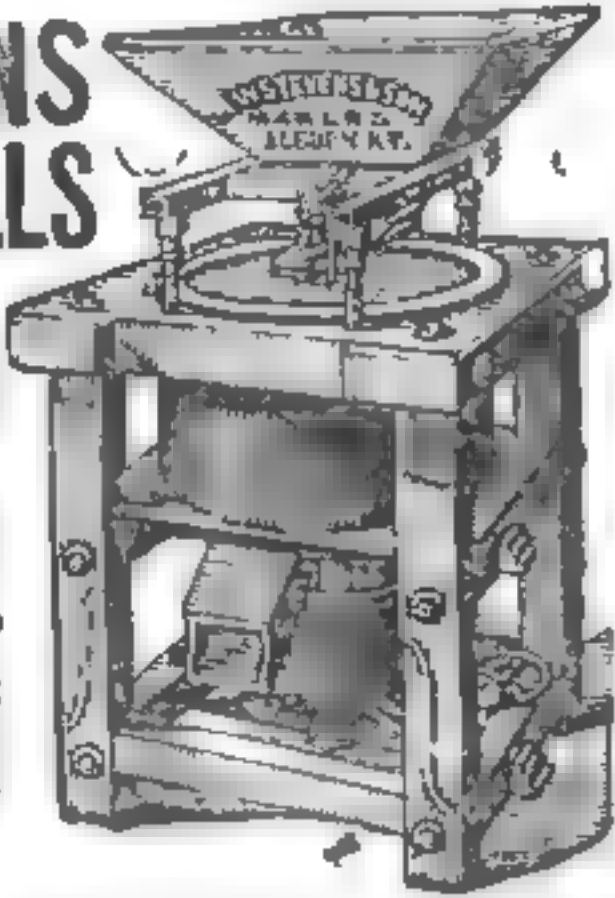
THE PATRONAGE of the MILLING TRADE is MOST RESPECTFULLY SOLICITED.

WOOD ENGRAVING LITHOGRAPHY

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For CORN and FEED GRINDING

Genuine French
BUHR STONES
Power Corn Sheller
Prices Below the Lowest
A.W. STEVENS & SON
AUBURN, N. Y.
Mention this paper.



PREJUDICE Investigate the merits of the Reliance Safety Water Columns. It pays to keep posted. Many of the largest corporations have found it profitable to discard the old appliances and adopt these safeguards. There is always economy in safety. Send for illustrated price-list.
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THE "HARLOW" Positive Feed Lubricators.

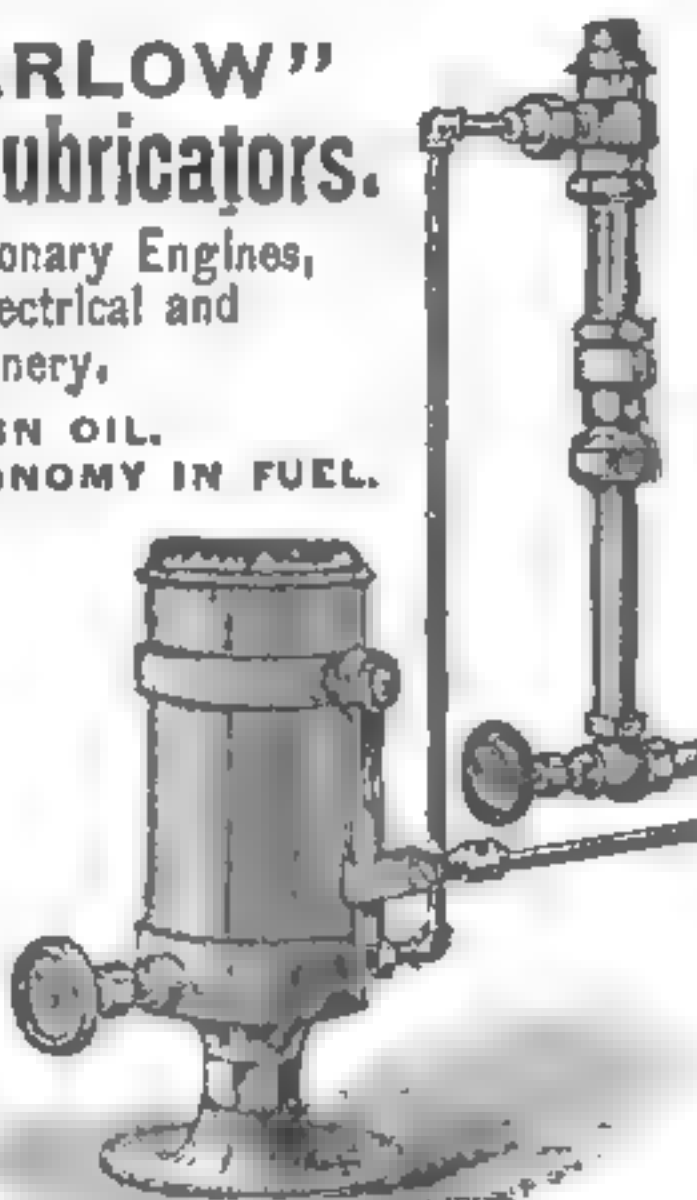
For Marine and Stationary Engines, Steam Pumps, Electrical and other Machinery.

MAXIMUM ECONOMY IN OIL.
MARKED ECONOMY IN FUEL.

Not dependent upon or operated by Steam Pressure, Condensation or Gravity.
Not affected by changes of temperature.

BEING operated by some moving portion of the engine or machine to be lubricated, the "Harlow Lubricator" starts and stops with the engine or machine being lubricated, without requiring the slightest attention from the engineer or operator, always delivering the oil in any amount from a drop to a constant stream.
The cup can be filled at any moment while the engine or machine being lubricated is in operation, without causing any leakage either of oil or steam.

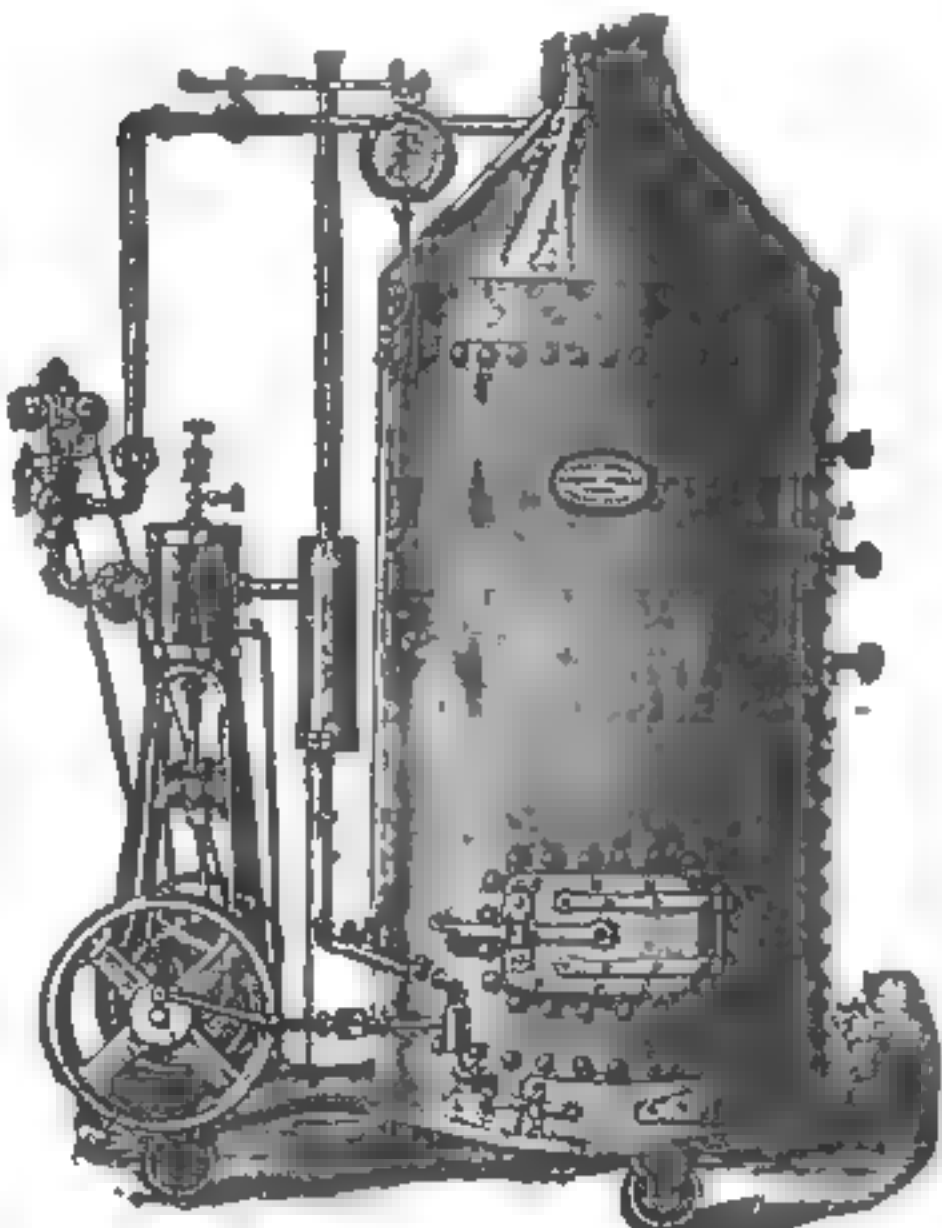
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TONAWANDA ENGINE AND BOILER WORKS

A Large Assortment of Machinery.

The Best 6-Horse Power Semi-Portable Upright Engine and Boiler Made.



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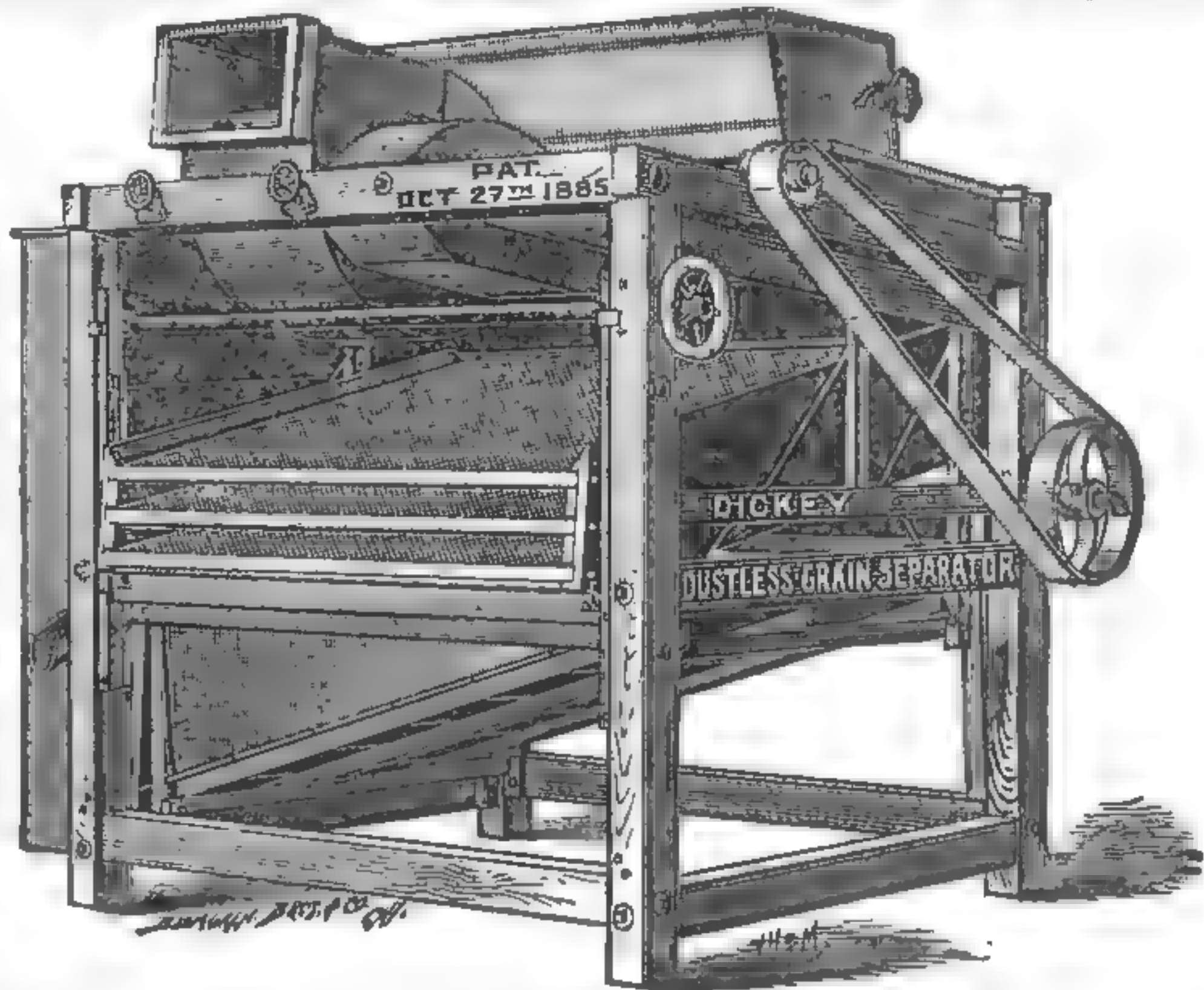
ARMITAGE, HERSCHELL & CO.

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DICKEY DUSTLESS GRAIN AND FLAX SEPARATOR

This Separator is our latest and most perfect, and guaranteed to be the superior of any now on the market. This machine, as can be seen by the cut, is not a warehouse fanning mill with one patent attachment, but is Dustless Separator, made for the express purpose of thoroughly cleaning and separating all kinds of grain in large quantities; its construction is such that the working machinery and weight is all within the parts or anchors.

WE CLAIM FOR IT SUPERIORITY.



WE CLAIM FOR IT SUPERIORITY.

We claim for it Superiority over everything of the kind made, in simpleness, durability, saving of power, capacity and cost of construction. Its height will accommodate any number of spouts from different points, without moving machine. They have a capacity from 700 to 1,500 bushels per hour. We also control exclusively the manufacture of the celebrated Dickey Giant, End and Side Shake, Warehouse Mills, that have attained such a world-wide reputation. Sent on approval to any reliable party. For full particulars address,

A. P. DICKEY MANUFACTURING CO. Successors to **Dickey & Pease** RACINE, WIS.

CORNISH'S (OLD ESTABLISHED) ORGANS AND PIANOS!

THE ONLY FIRM OF MANUFACTURERS IN AMERICA selling direct to Consumer. From Factory to Family at Wholesale Rates on Terms to suit Purchaser.

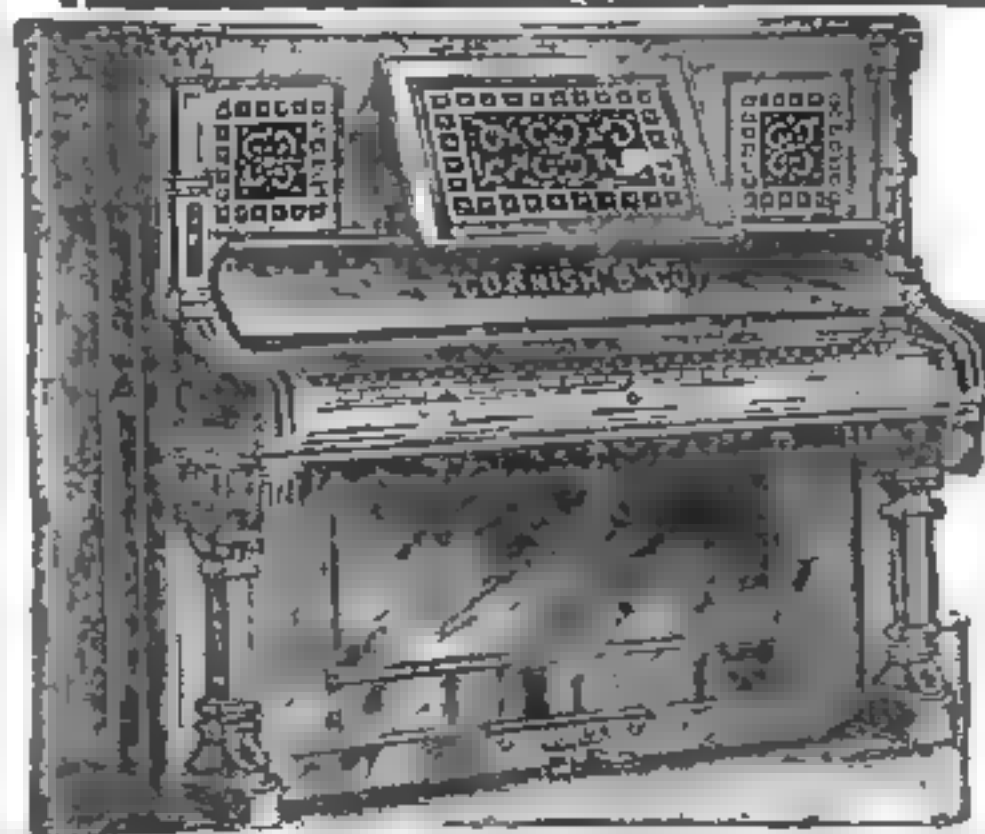
\$75 ORGAN { EXACTLY LIKE THIS CUT } **\$50**

\$15.00 CASH After ten days' trial, and the balance of price, \$35, to be paid in 7 monthly installments of \$5 each. OR IF CASH IS SENT WITH ORDER, WE WILL SPECIALLY ACCEPT \$45.00.

CORNISH'S Specially designed Cabinet Organ, Style "Cano-plietta," No. 10,000, contains 3 sets Orchestral toned Resonatory Pipe Quality Reeds; 6 Octaves; 10 Solo Stops; 2 Octave Couplers (Bass and Treble); 2 Knee Swells and all late improvements. Dimensions—65 in. high, 48 long, 21 wide.

WARRANTED FOR TEN LONG YEARS.
SOLID WALNUT CASE, HIGHLY FINISHED.
Handsome Stool and large Instruction Book, making a Complete Musical Outfit.

HOW TO ORDER. Send a reference as to your responsibility from any Banker, Postmaster, Merchant or Express Agent, and Organ will be shipped at once on Ten Days' Test Trial, and if not, after trial, satisfactory, you can return it and we will pay freight charges both ways. IF YOU RUN NO RISK.



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EUROPEAN ECHOES.

THE French council of agriculture has voted in favor of imposing a duty of 3 francs on Indian corn, 5 francs on corn-meal and its derivatives, 3 francs on rice in the husk, and 8 francs on broken and cleaned rice and rice flour.

SAYS the London "Millers' Gazette" of February 3: During December the exports of American flour were among the largest on record, the month's total being 1,222,603 barrels, against only 704,388 barrels in December, 1888. Thus the total for the first six months of the present season amounts to 5,927,137 barrels, against 4,880,150 barrels last year. The figures for each month since June, compare as follows:

	1889.	1888.
	Barrels.	Barrels.
July.....	839,736	810,419
August.....	1,018,737	874,962
September.....	859,075	956,393
October.....	1,068,536	944,545
November.....	918,450	589,443
December.....	1,222,603	704,388
Total.....	5,927,137	4,880,150

The main increase over last year, therefore, has occurred since October, and as American flour does not seem to meet so ready a sale as formerly, stocks are accumulating in the ports. Liverpool holds 145,455 sacks, London about 400,000 sacks, and Glasgow about 175,000 sacks.

SAYS the London "Miller" of February 3: Australia is already taking a position of importance, having put afloat 132,000 quarters of wheat drawn from a total crop of over 2,000,000 quarters. February shipments seem likely to be large, as sellers are not very staunch in holding to the 35s. now asked. Possibly the competitive offer of Australian wheat will affect the bulk of white Californian now on passage and the white sample of the new Indian crop. It is remembered that, having entered February, winter obstacles to navigation can only now be of short duration, and that farmers' deliveries are likely to keep liberal, so as to allow the seeding-time of March freedom from market work. Meanwhile current and early prospective supplies do not and can not overweight the market, so that adverse weather or a stiffening-up of opinion might easily help February and March quotations. France, hitherto reserved in buying, seems now uncertain in action. French flour, now 33s. 6d., is quoted 34s. 1d. for March-June, but wheat, 42s. 2d., is offered at same terms right up to August. The daily journals quote bread 2d. per pound in Paris, and meat and potatoes almost 60 per cent. more than in London. Red wheat, lumped together from America and Russia and India, seems likely to keep relatively scarce. Strength is shown by all the present first-hand holders of good red wheat. Russia with its improving rouble refuses to sell except at full rates. America and India are sparing in their offers, so that millers are glad to get supplies from English farmers to make up their grists. Of white wheat the choice is good and likely to be better. Long berried New Zealand wheat at about 37s. in Mark Lane is in favor.

PATENTS ARE DEAR AT FIRST.

Writing from the Iowa Agricultural College to an agricultural journal, W. I. Chamberlain says: "For a few striking examples of manufacture under patent, take local prices at Ames, Ia., a few days ago, when I last inquired. Oatmeal or rolled avena at the grocers' in neat two-pound packages, 15 cents for two pounds. Oats bought at the elevator not a stone's throw distant for 15 cents for 32 pounds, a bushel. That is, the farmer must give 16 pounds of oats for one pound of oatmeal; 1,600 per cent. profit between producer and consumer. This does not account for wastes of milling, but they are not great when the 'oat shorts' sell per ton for feed at about what the oats cost per ton. How and why is such profit from producer and consumer possible? Simply because our present patent laws make a patent an absolutely unrestricted monopoly for 17 years. In this case

owners of patents on machinery and methods of manufacturing oatmeal join hands, form a trust or combination to limit total output and fix price at will. They pay \$80,000 to four mills in Iowa to lie still or export their products; and we, the producers and consumers, pay the \$80,000 and enrich the combination besides. Invention should be encouraged, but inventors should not be permitted to 'own the earth' and parcel it out to us at their own price. On sewing-machines, mowing-machines and the like the buyer paid twice or thrice the real cost of manufacture, until the patents expired or competition among patentees reduced prices. But often one patent practically excludes competition, as in the case of the telephone and the air-barke. At the same grocery best roller-process flour retails at \$6 per barrel, and at the same elevator wheat brings 60 cents for shipment. Ten bushels of wheat buy a barrel of flour. Five bushels used to buy a barrel of flour. The roller-process came in under patent, increased by ten per cent. the product of flour per bushel of wheat, and widened by 100 per cent. the former margin between producer and consumer."

Mr. Chamberlain proposes no remedy. None is possible. When it is impossible for an inventor to make money out of inventions, he will cease to invent. Even the craziest crank among socialists, anarchists and other unwholesome "ists" would hardly propose that the government shall take possession of men with inventive brains and force them to invent machines and processes that shall be devoted without restriction to the use and the convenience of the public. Mr. Chamberlain's figures on the roller-process hardly square with facts, and in general it is easy to prove that the aggregate effect of patents has been to cheapen wares and to place comforts within the reach of all.

THE JACKSON FAILURE.

The creditors of the George T. Smith Middlings Purifier Company have received the following statement of the affairs of that concern:

SECURED INDEBTEDNESS.		Collateral.
Notes to the Preston Bank.....	\$15,000	\$18,000
Notes to A. S. Kean.....	25,000	33,000
Notes to the First National Bank of Albion..	13,620	21,000
Notes to the Union Bank.....	10,000	15,000
Totals.....	\$63,620	\$87,000
UNSECURED INDEBTEDNESS.		
Notes to the Preston Bank.....		\$70,000
Notes to the Marshall First National Bank.....		5,000
Notes to Jackson City Bank.....		35,000
Jackson City Bank overdraft.....		17,000
Notes for merchandise.....		70,000
Open accounts.....		73,000
Judgments in favor of Mason & Clark.....		11,000
Total.....		\$281,000
Liability as endorsers on notes made by the Geo. T. Smith Middlings Purifier Co. of Canada, about.....		\$78,000
Discounted at Jackson City Bank, liability as endorsers on Geo. T. Smith's notes for about.....		50,000
Discounted at Jackson City Bank, liability as endorsers on the company's commercial paper.....		119,000

Other indebtedness to a considerable amount has been discovered. The assets of the concern are not yet classified, and there is doubt concerning the titles to the patents that are included in the assets. The assignees are engaged in finding out the status of these patents. Among the smaller creditors of the company are several of the milling journals, one or two of which have been "nipped" quite badly.

The Bill of Fare in February 15 number of *Good Housekeeping* is devoted particularly to the important subjects of "House Heating, Home Lighting and Cooking," divided into departments as follows: "Fire and its Domestic Uses"; "Heating of Houses"; "Steam and Hot Water Heating"; "Stoves and Fuel." Lighting: "The Oil We Burn"; "Perfumed Light"; "What Ails That Lamp." Cooking: "The Use of Gas for Cooking Purposes"; "The Kerosene Oil Stove"; "Something About Kerosene." In addition to the above, there is a seasonable article on "Family Fashions and Fancies," by Helena Rowe; "Woman's Work and Wages," by Helen Campbell; interesting matter in the departments of "Quiet Hours with the Quick Witted," "The Cozy Corner," "Editor's Portfolio," "Home Correspondence," and a generous number of pretty poems.

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16 SIZES, 5 to 500 H. P.
Not yet equaled by any form of Engine for
HIGH FUEL DUTY AND SIMPLICITY.

STANDARD 13 Sizes in Stock.
5 to 250 H. P.
3000 in use in all parts of the Civilized World.

JUNIOR 6 Sizes in Stock,
5 to 50 H. P.
An Automatic Engine cheaper than a Slide Valve.
WELL BUILT. ECONOMICAL. RELIABLE.
Over 300 Sold the First Year.
All the above built strictly to Gauge with
INTERCHANGEABLE PARTS.
REPAIRS CARRIED IN STOCK.
SEND FOR ILLUSTRATED CATALOGUES.

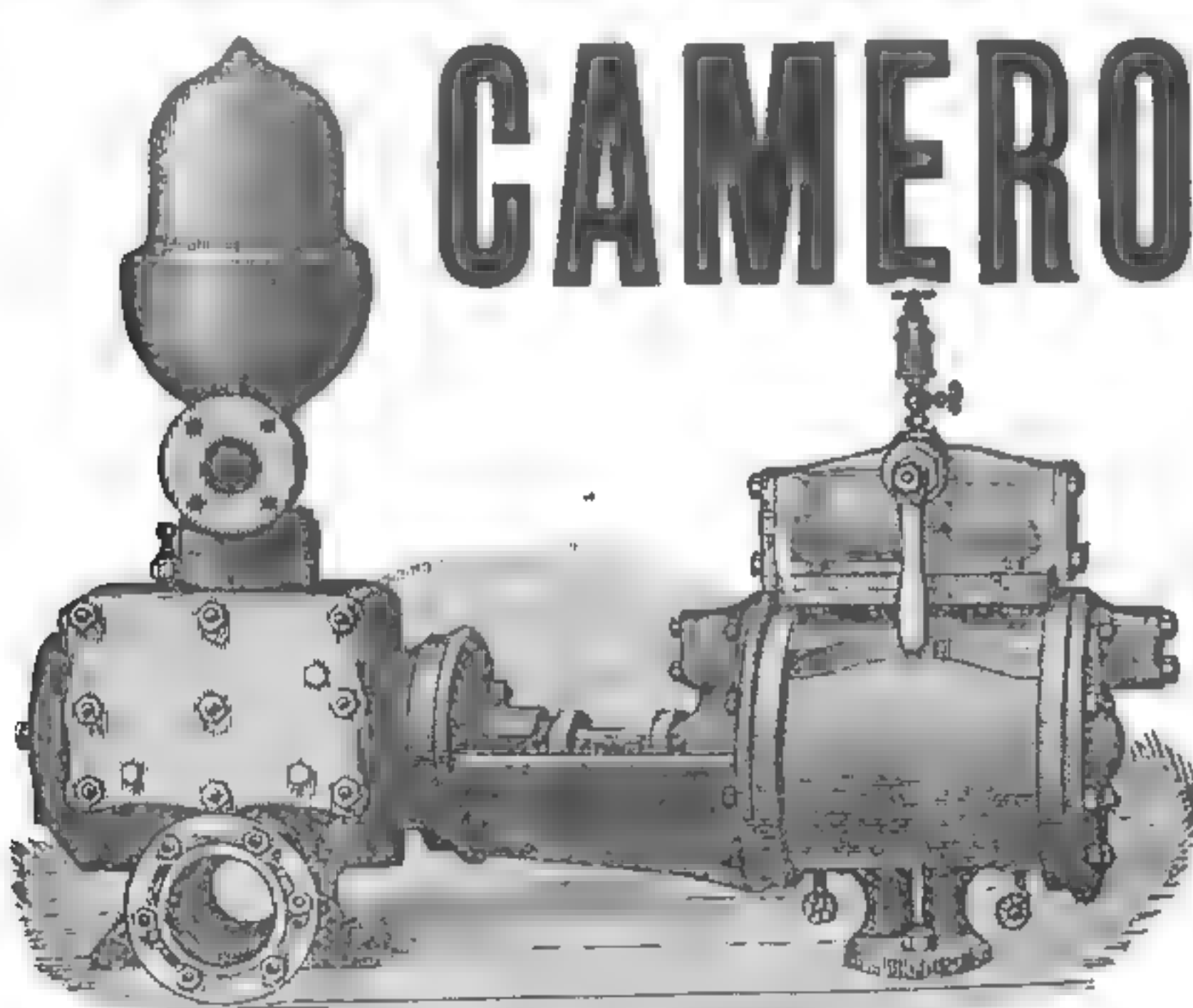
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Philadelphia,	608 Chestnut St.	M. B. Muehle, Jr. & Co.

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Charlotte, N. C.	36 College St.	The D. A. Tompkins Co.
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THE STANDARD OF EXCELLENCE.

SIMPLE! COMPACT! DURABLE!

"NO OUTSIDE VALVE GEAR."

Steam, Air & Vacuum Pumps in Every Variety

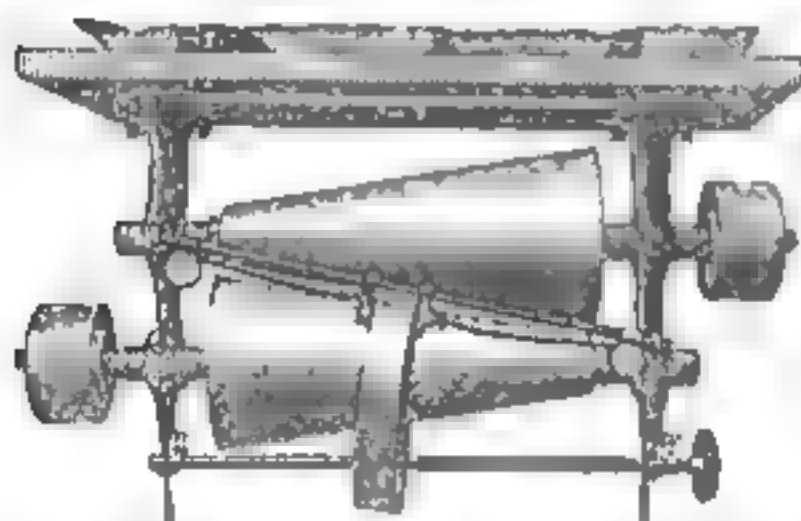
FOR ILLUSTRATED CATALOGUE ADDRESS

THE A.S. CAMERON STEAM PUMP WORKS

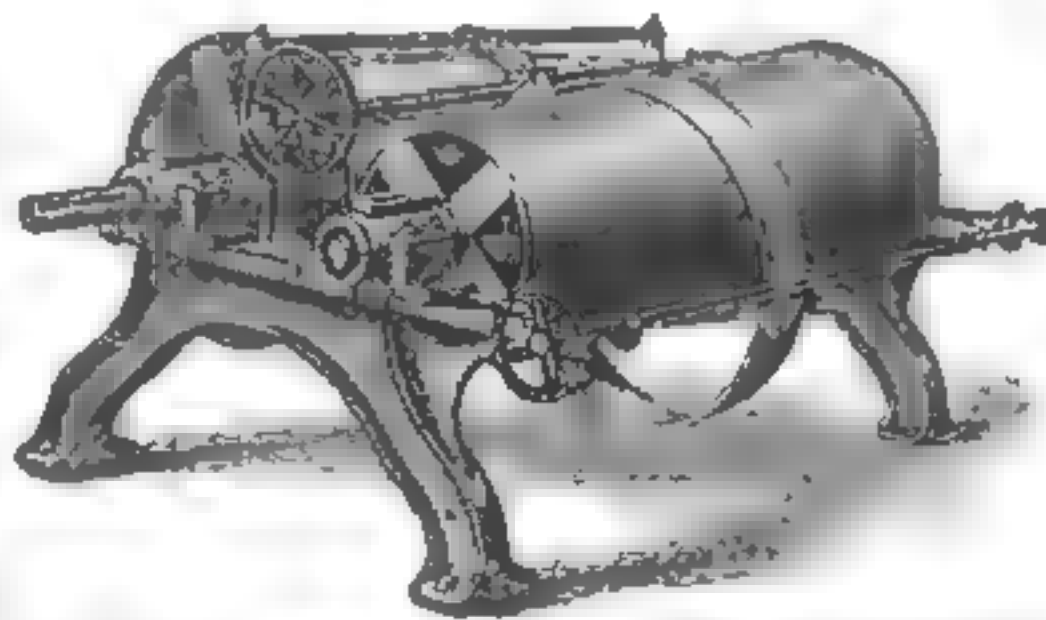
Foot of East 23d Street, - New York.

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"PATENTED."



This cut represents a set of hanging cone pulleys. This pattern is intended for that class of machinery that stops and starts at the same speed, and at the same time be able to change the speed more or less while running. These cones are also fitted with a governor where a steady motion is required and the initial power is



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SHIPPERS
CAN SAVE TIME
AND TROUBLE
AND CASH
BY USING
BARLOW'S
PATENT
SHIPPING
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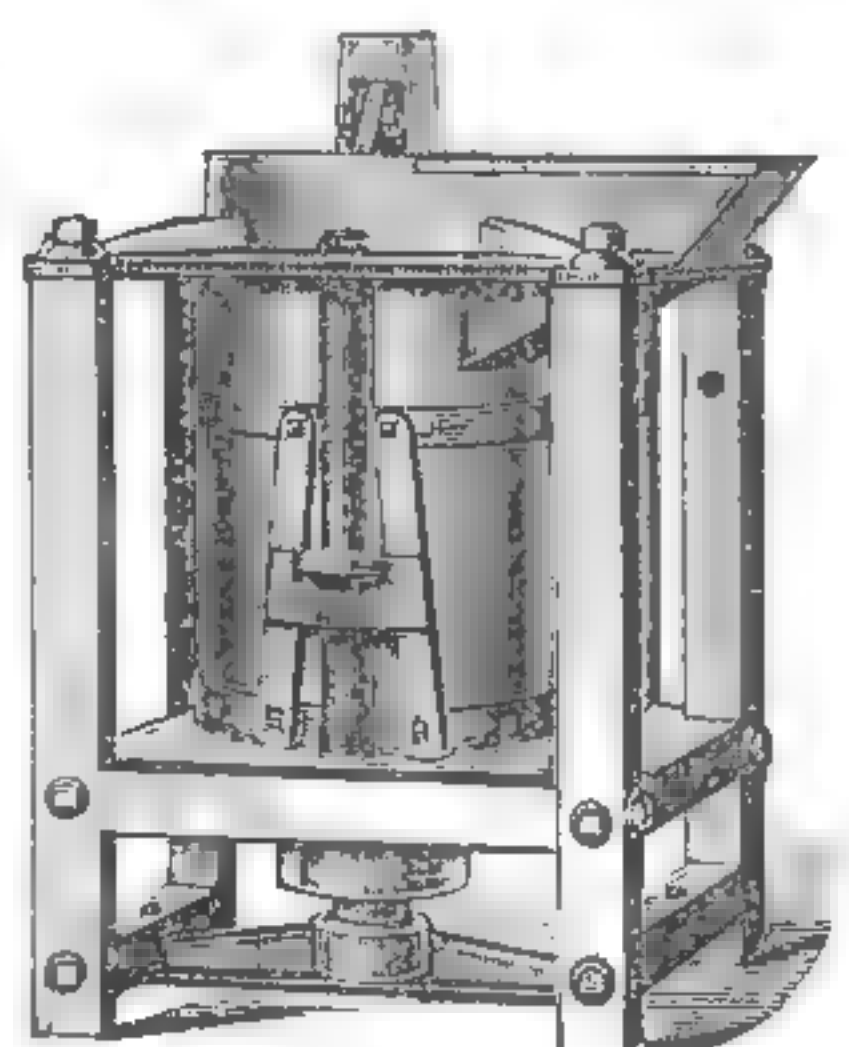
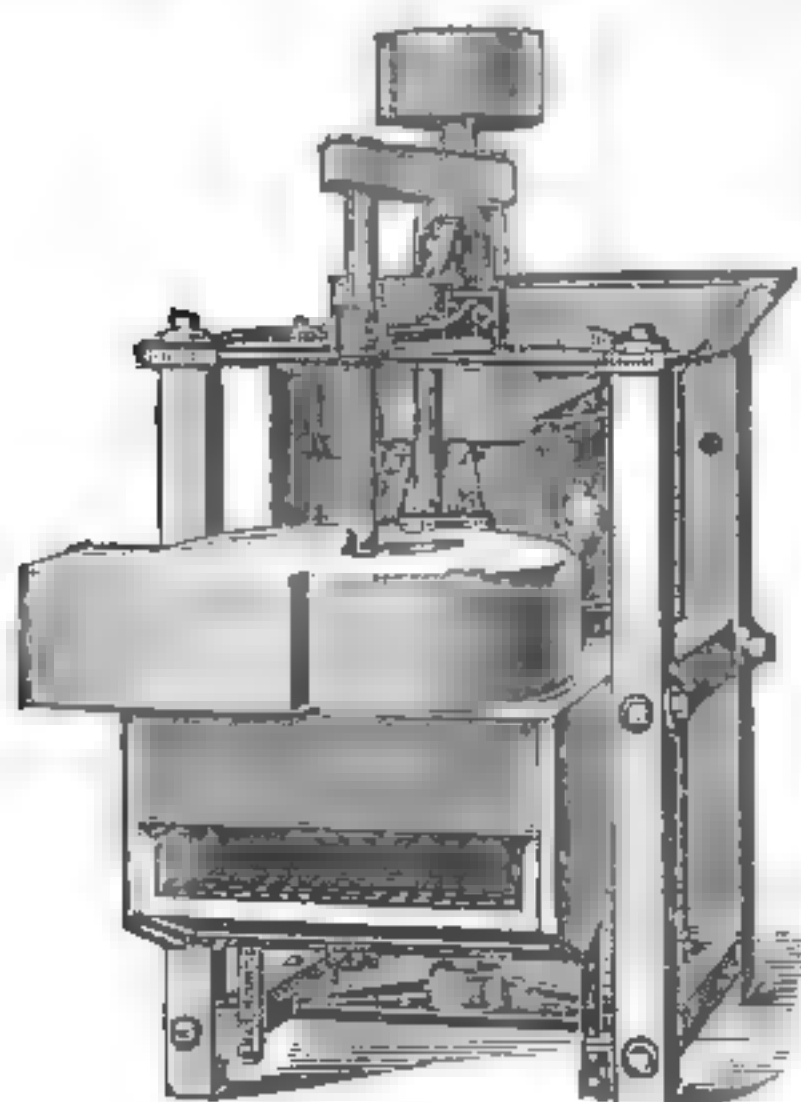
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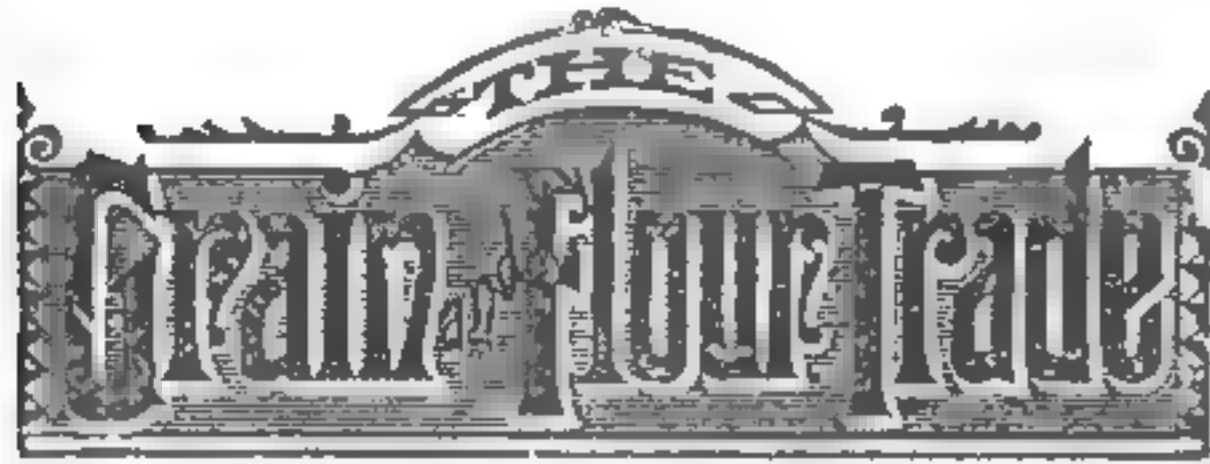
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OFFICE OF THE MILLING WORLD,

BUFFALO, N. Y., Feb. 22, 1890.

Friday of last week was a day of active, higher and excited wheat markets on reports of Russian shortage and good buying. February wheat in New York closed at 84½c., with Atlantic port receipts 23,377, exports 210,574, and options 10,000,000 bushels. February corn closed at 35½c., with receipts 448,057, exports 350,294, and options 2,666,000 bushels. February oats closed at 27½c., with receipts 155,461, exports 38,590, and options 370,000 bushels. Wheat flour did not strengthen with the boom in wheat. Receipts included 8,688 sacks and 22,149 barrels, and exports 8,772 sacks and 10,510 barrels. The Russian official report made the wheat shortage 112,000,000 bushels, and the rye shortage 152,000,000 bushels, but the effect of this report was discounted long ago. The minor lines were featureless.

Saturday brought excited, unsettled markets, all closing lower. European cables reported crop damage by frosts, but the effect was slight. February wheat closed at 84½c., with receipts 20,874, exports 42,414, and options 2,000,000 bushels. February corn closed at 36½c., with receipts 525,376, exports 640,014, and options 616,000 bushels. February oats closed at 27½c., with receipts 196,447, exports 21,746, and options 340,000 bushels. Wheat flour was possibly a shade stronger, but exceedingly dull, with jobbers and exporters examining stocks and inquiring about certain lines. Prices were unchanged. Receipts included 8,110 sacks and 17,688 barrels, and exports 44,529 sacks and 2,756 barrels. The minor lines were unchanged.

Monday brought dull, unsettled and irregular markets. February wheat closed at 84½c., with receipts 32,460, exports 18,798, and options 2,350,000 bushels. February corn closed at 35c., with receipts 481,642, exports 440,718, and options 2,224,000 bushels. February oats closed at 27½c., with receipts 218,565, exports 207,558, and options 450,000 bushels. Wheat flour was duller, with buyers holding off for a break in wheat. Western mills were shutting down and refusing to make further concessions. Buyers and sellers ranged 5@10c. apart. Receipts were 6,482 sacks and 22,340 barrels, and exports 18,832 sacks and 11,433 barrels. The other lines were featureless. The visible supply in the United States and Canada was:

	1890. Feb. 15.	1889. Feb. 16.	1888. Feb. 18.
Wheat.....	30,073,303	33,435,466	39,564,709
Corn.....	12,583,360	14,538,495	8,234,494
Oats.....	5,813,583	8,155,193	4,953,602
Rye.....	1,477,496	1,712,733	367,016
Barley.....	1,860,986	2,162,159	2,737,523

Tuesday brought active markets, opening lower and closing stronger, on better cables and covering by shorts. February wheat closed at 84½c., with receipts 47,186, exports 165,288, and options 3,120,000 bushels. February corn closed at 35c., with receipts 634,833 and exports 728,045 bushels. February oats closed at 27c., with receipts 181,677, exports 13,388, and options 650,000 bushels. Wheat flour was dull and easy, with small trading, receipts 5,355 sacks and 34,749 barrels, and exports 25,224 sacks and 11,794 barrels. The minor lines were featureless.

The following shows the amount of wheat and flour, together with the amount of corn on passage to United Kingdom, for ports of call or direct ports for the weeks mentioned:

	1890. Feb. 18.	1889. Feb. 19.
Wheat and flour, qrs....	2,266,000	2,224,000
Corn, qrs.....	610,000	331,000

The following shows the amount of wheat and corn on passage to the Continent for the past week and for the same week last year:

	1890. Feb. 18.	1889. Feb. 19.
Wheat, qrs.....	467,000	401,000
Corn, qrs.....	370,000	101,000

	Qrs.
Shipments India wheat to U. K.....	45,000
do do Continent.....	2,500

The imports into the United Kingdom for the past week and for the same weeks in previous years were as follows:

	1890. Feb. 18.	1889. Feb. 11.	1888. Feb. 19.
Wheat, qrs.....	151,000	135,000	185,000
Corn, qrs.....	141,000	143,000	162,000
Flour, bbls.....	127,000	167,000	159,000

Wednesday was a day of higher markets, on lighter receipts and on general covering by shorts. February wheat closed at 85c., with receipts 64,462, exports 68,769, and options 2,762,000 bushels. February corn closed at 35½c., with receipts 452,386, exports 376,211, and options, 2,468,000 bushels. February oats closed at 27c., with receipts 172,417, exports 48,037, and options 500,000 bushels. Buckwheat grain was 35@39c. for fair to choice. Rye grain was dull at 54@57½c. for Western, 57@58½c. for State afloat and 52@53c. on track. Barley was dull and easy at 58@72c. for Canada, 48@57c. for 2-rowed State, and 53@56c. for 6-rowed Western. Malt was unquotable, with no demand at all. Mill-feed was quiet at 62½@67½c. per 40 and 60 lb.; 62@62½c. per 80-lb.; 75c. for 100-lb.; and 70c. for rye.

Wheat flour was dull and featureless. Receipts were 7,412 sacks and 40,990 barrels, and exports 21,507 sacks and 27,919 barrels. The home trade was wholly in small lots at old prices to fill out old shipments. The quotations were:

SPRING FLOUR.		
	Sacks.	Barrels.
No grade.....	\$1.25@1.40	\$....@....
Fine.....	1.40@1.70	1.60@2.00
Superfine.....	1.86@2.10	2.10@2.15
Extra No. 2.....	2.15@2.50	2.40@2.85
Extra No. 1.....	2.85@3.10	2.10@3.65
Clear.....	3.00@3.25	3.05@4.00
Straight.....	3.75@4.15	4.00@4.60
Patent.....	4.35@4.65	4.50@5.00

WINTER FLOUR.		
	Sacks.	Barrels.
No grade.....	\$1.35@1.70	\$....@....
Fine.....	1.85@2.00	1.85@2.15
Superfine.....	1.85@2.15	2.25@2.40
Extra No. 2.....	2.25@2.70	2.00@2.50
Extra No. 1.....	2.75@3.40	2.85@3.65
Clear.....	3.10@3.50	3.40@4.00
Straight.....	3.65@3.90	4.00@4.40
Patent.....	3.95@4.20	4.60@4.80

CITY MILLS.		
W. I. grades.....	4.30@4.35	
Low grades.....	2.30@2.40	
Patents.....	4.65@5.20	

Rye flour was duller and easier at \$2.75@2.90. Buckwheat flour was slow and steady at \$1.25-@1.50 for common sound to fancy. Corn products were quiet at the following quotations: Western and Southern in barrels, \$2.25@2.50; Brandywine \$2.55; coarse, in bags, 68@72c.; white and yellow fine 90@95c.; brewers \$1.00.

Thursday brought no decided changes in market conditions, except a slight increase in the price of wheat. February wheat closed at 86½c., with receipts 8,800, exports 7,082, spot sales 119,000 and options 6,720,000 bushels. February corn closed at 35½c., with receipts 116,000, exports 72,434, spot sales 84,000, and options 2,440,000 bushels. February oats closed at 27½c., with receipts 106,000, spot sales 116,000, and options 100,000. Wheat flour was quiet, with re-

ceipts 11,553 packages and sales 17,000 barrels, including the following: Low extras \$2.15@2.60 city mills \$4.25@4.45; city mills patents \$4.65-@5.25; winter wheat low grades \$2.15@2.60; fair to fancy \$2.85@4.40; patents \$4.15@3.90; Minnesota clear \$3.10@4.05; Minnesota straights \$3.65@4.50; Minnesota patents \$4.15@5.00; Minnesota rye mixture \$3.10@3.60; superfine \$2.00@2.60.

BUFFALO MARKETS.

WHEAT—The market for spring wheat has stiffened up and prices are higher. There was a sale of 5,000 bushels of No. 1 hard at 90c. but later on it was held at 90½c. No. 1 Northern is quoted at 83½c. and No. 2 do at 84c. although a sale of 5,000 bushels was made early at 83½c. There is no call for winter wheat, which is nominal at 81½c. for No. 2 red and 78c. for No. 2 white. CORN—No. 3 yellow is firm at 33½@33¾c. No. 4 do at 32½c. No. 3 mixed 32½@33c. and No. 2 do at 31c. No-grade was sold at 29½@30c. OATS—No. 2 white oats were sold at 27½c. No. 3 white at 26½c. No. 2 mixed at 26½c. and No. 3 white at 26½c. No. 2 mixed at 26½c. and No. 3 mixed 25½c. The market is steady at these prices. RYE—There is little trading to report. Quotations remain at 52@53c. BARLEY—There is no change to report. Five cars of No. 1 sold at 65c; No. 2 is quotable at 68@62c. No. 3 at 52@56c. and Western at 36@50c. OATMEAL—Akron, \$6.00; Western, \$5.75 per bbl.; rolled oats, in cases, 72 lbs., \$3.25. CORNMEAL—Coarse, 80@85c.; fine, 85@90c.; granulated, \$1.50 per cwt. MILLFEED—City-ground coarse winter, \$13.50@14.00 per ton; fine do, \$14.50@15.50; finished winter middlings, \$15.00@15.50; coarse spring do, \$13.00@13.50.

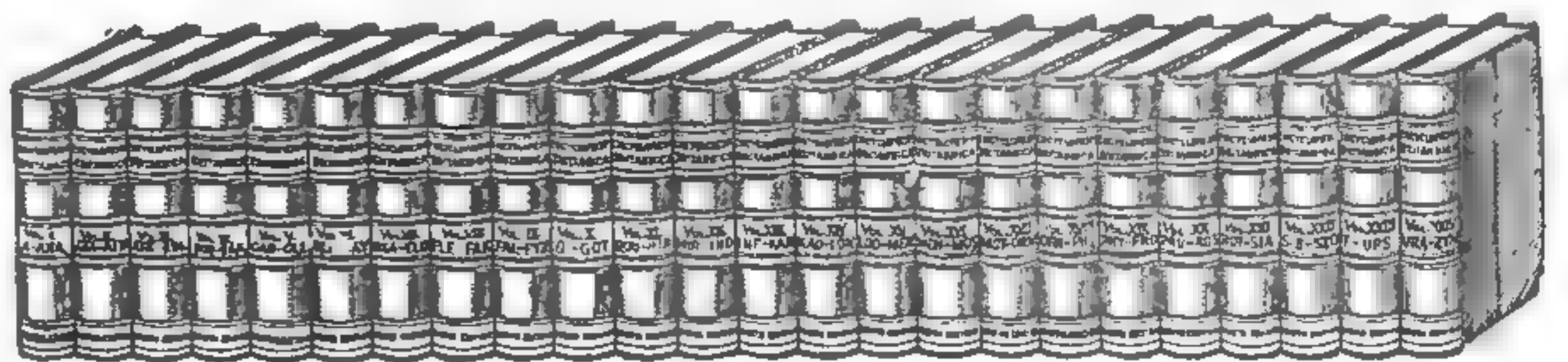
FLOUR MARKET.

Spring Wheat.		Winter Wheat.	
Patents.....	\$5.50@6.00	Patents ..	\$4.75@5.25
Straight.....	4.50@5.00	Straight..	4.25@4.75
Bakers.....	3.50@4.00	Clear ...	3.75@4.25
Red Dog... ..	2.25@2.75	Low grades ..	2.50@3.00

Retail prices 50c per bbl above these quotations. Buckwheat flour \$1.50@1.75 per 100 100 lbs.

The Fort Smith, Ark., Milling Co. enlarge.
E. C. Cadle, Waynesboro, Ga., builds a grist-mill.
W. H. Voshell & Bro., millers, McDonough, Del., dissolved.
B. Gathercoll's mill, Fort Fairfield, Me., burned; loss \$6,000; insured.
Steffey & Finlay, Williamsport, Md., build a 60-barrel roller flouring-mill.
E. M. Spears, Rogersville, Tenn., will build a 50-barrel water-power flouring-mill.
Young, Grigsby & Co., West Baden, Ind., will build a 60-barrel roller flouring-mill.
Chase & Co., millers, Rochester, N. Y., are succeeded by Chase, Armstrong & Shaw.
The Idaho Milling & Mining Co., Seattle, Wash., is a recently incorporated concern.
Taylor Bros. & Hall, Macon, Ga., are about to build a flouring-mill and a grain-elevator.
H. J. Smith, Mason City, Ia., wants an outfit of machinery for a 50-barrel feed and grist-mill.
Donoho & Henderson, Vermillion, S. D., want an outfit of machinery for a 75-barrel roller mill.
H. A. Tiffans, Manistee, Mich., has points on a \$60,000 flouring-mill company now organizing in that town.
The new flouring-mill at Hamlin, Kan., burned four days after being started; loss \$9,000; no insurance; the owners, a stock company, will probably rebuild.
At Marceline, Mo., Feb. 12, the Palace roller flour-mill, owned by White & Schupp, was destroyed by fire. Loss \$25,000; insurance \$14,000. There was a large amount of wheat and flour stored in the mill. It is believed the fire was of incendiary origin. Five attempts have been made by incendiaries within the past month to destroy the town.

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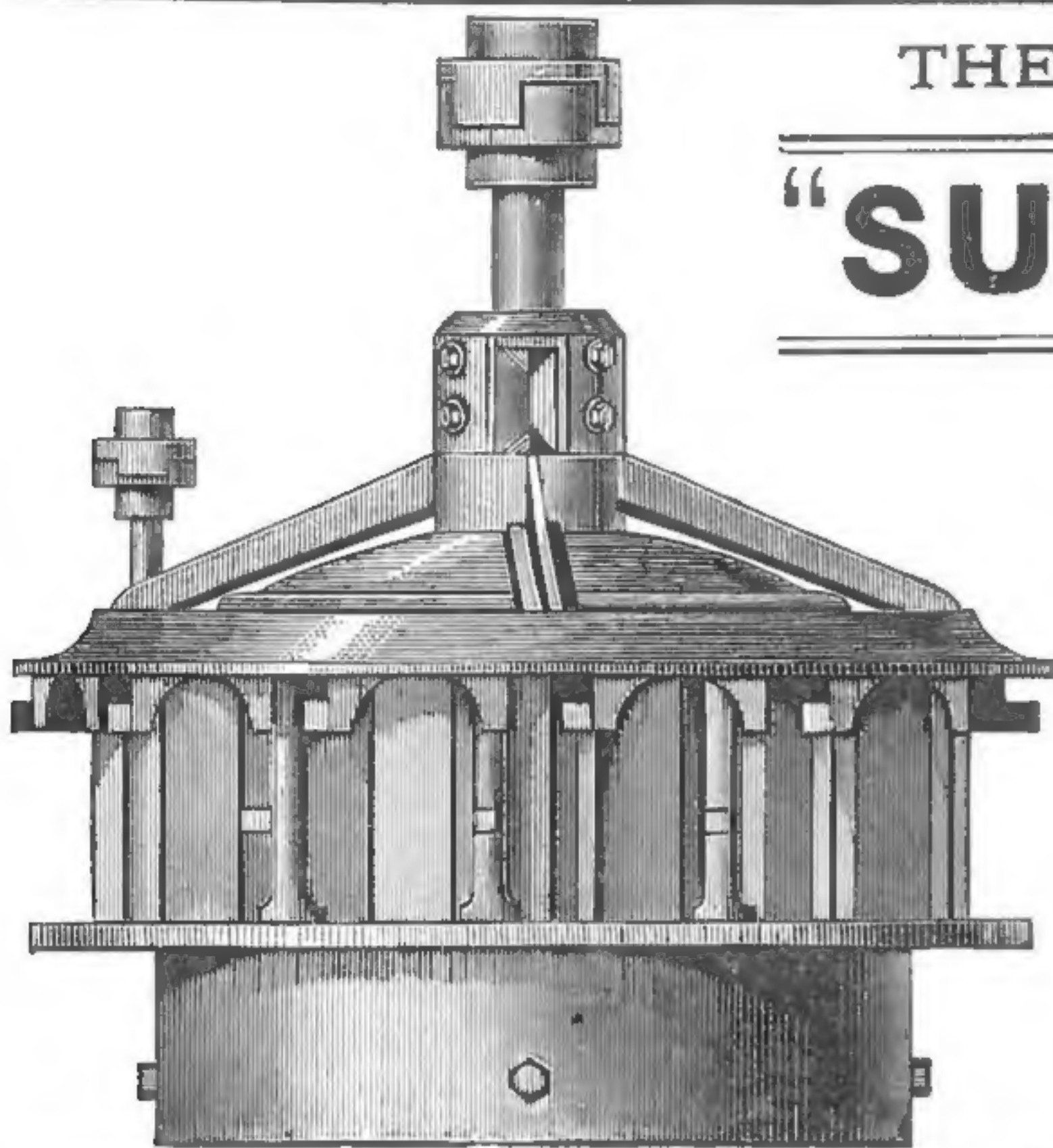
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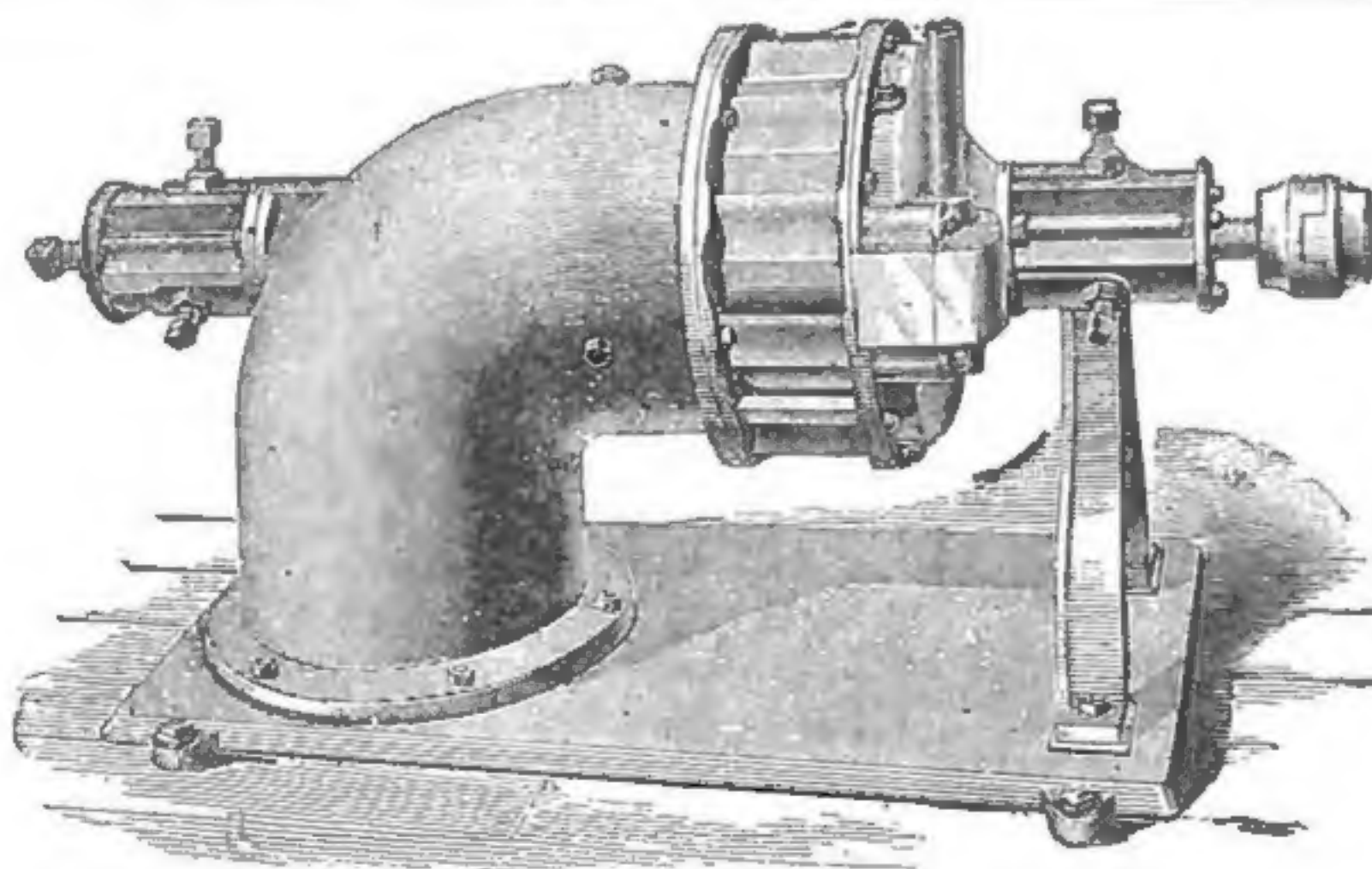
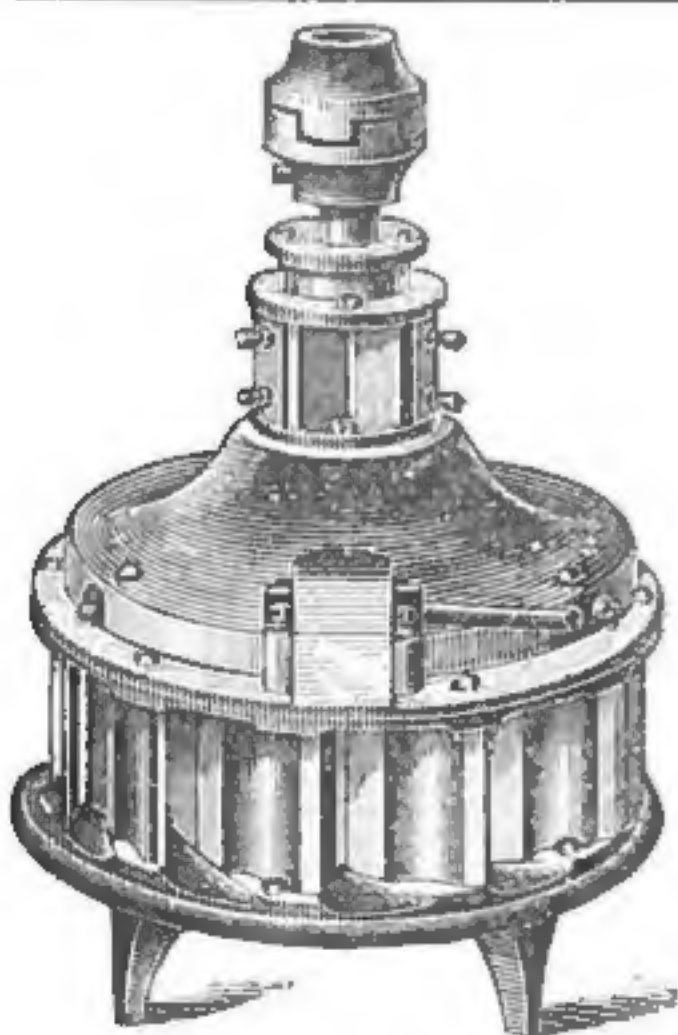
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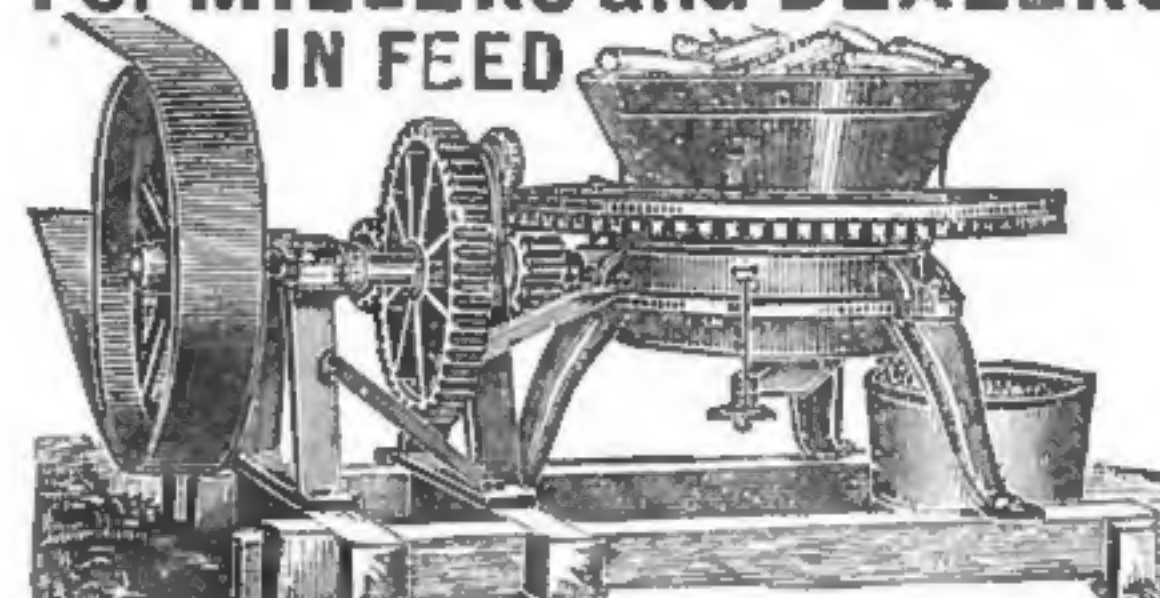


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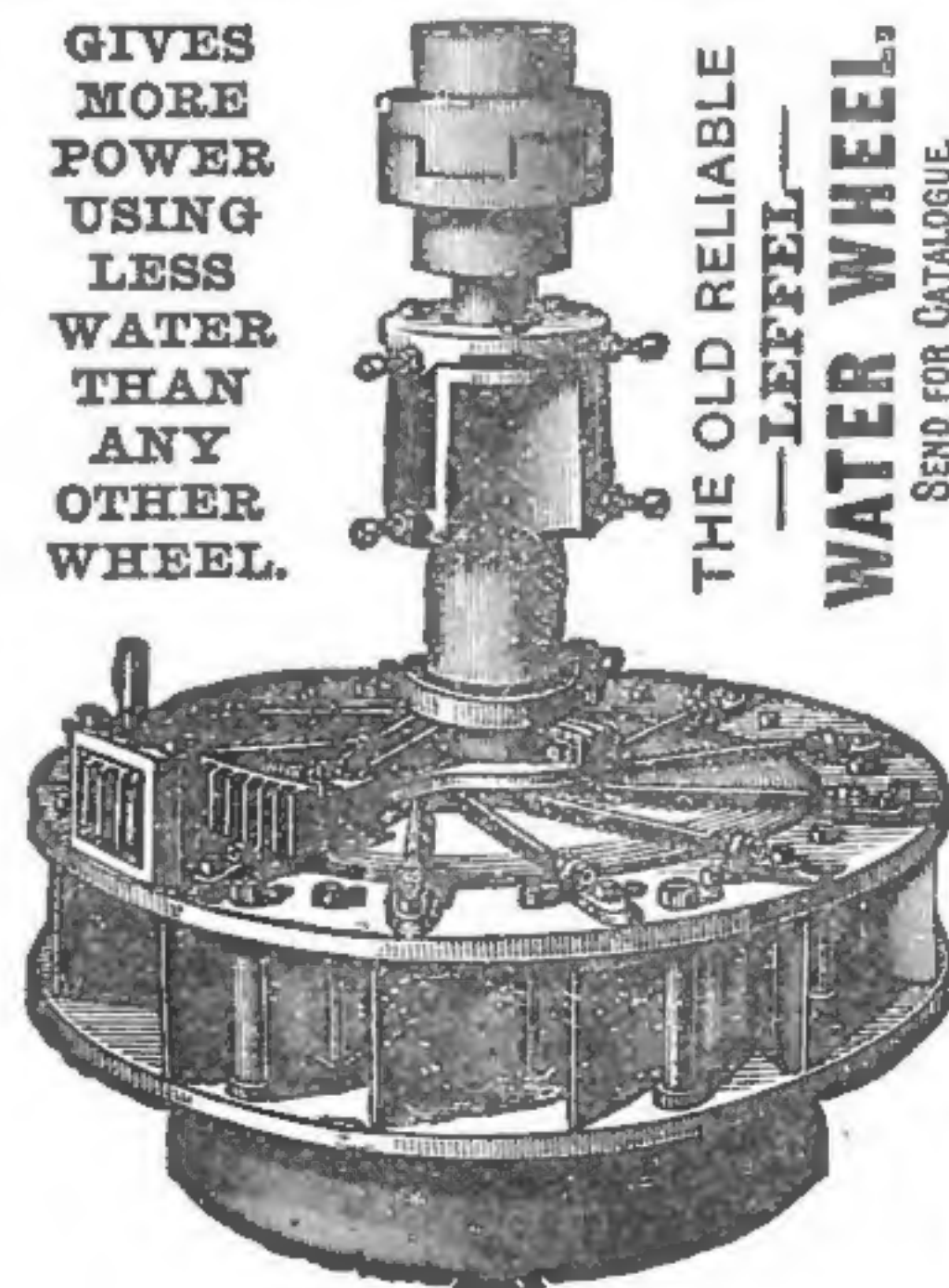
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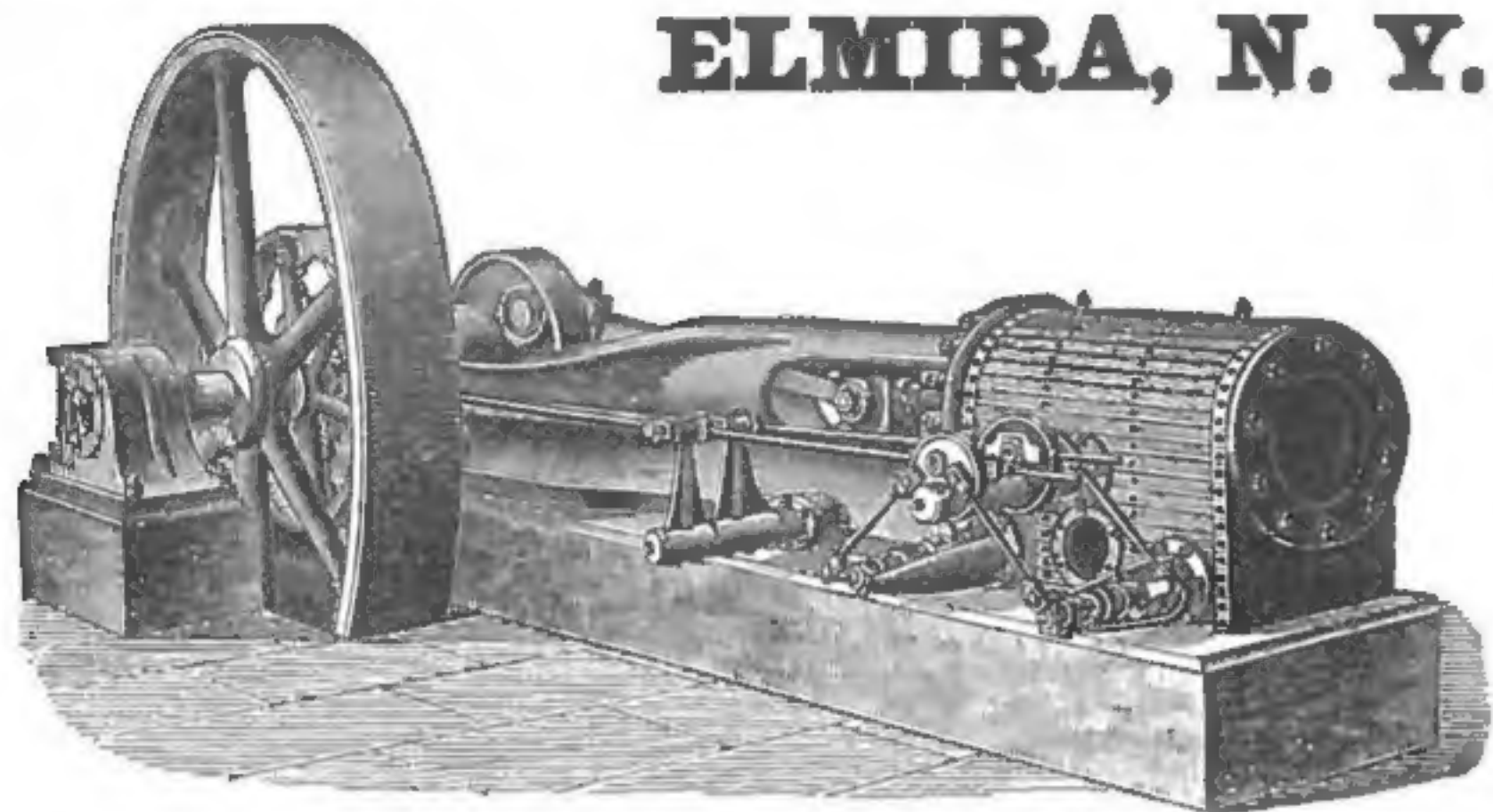
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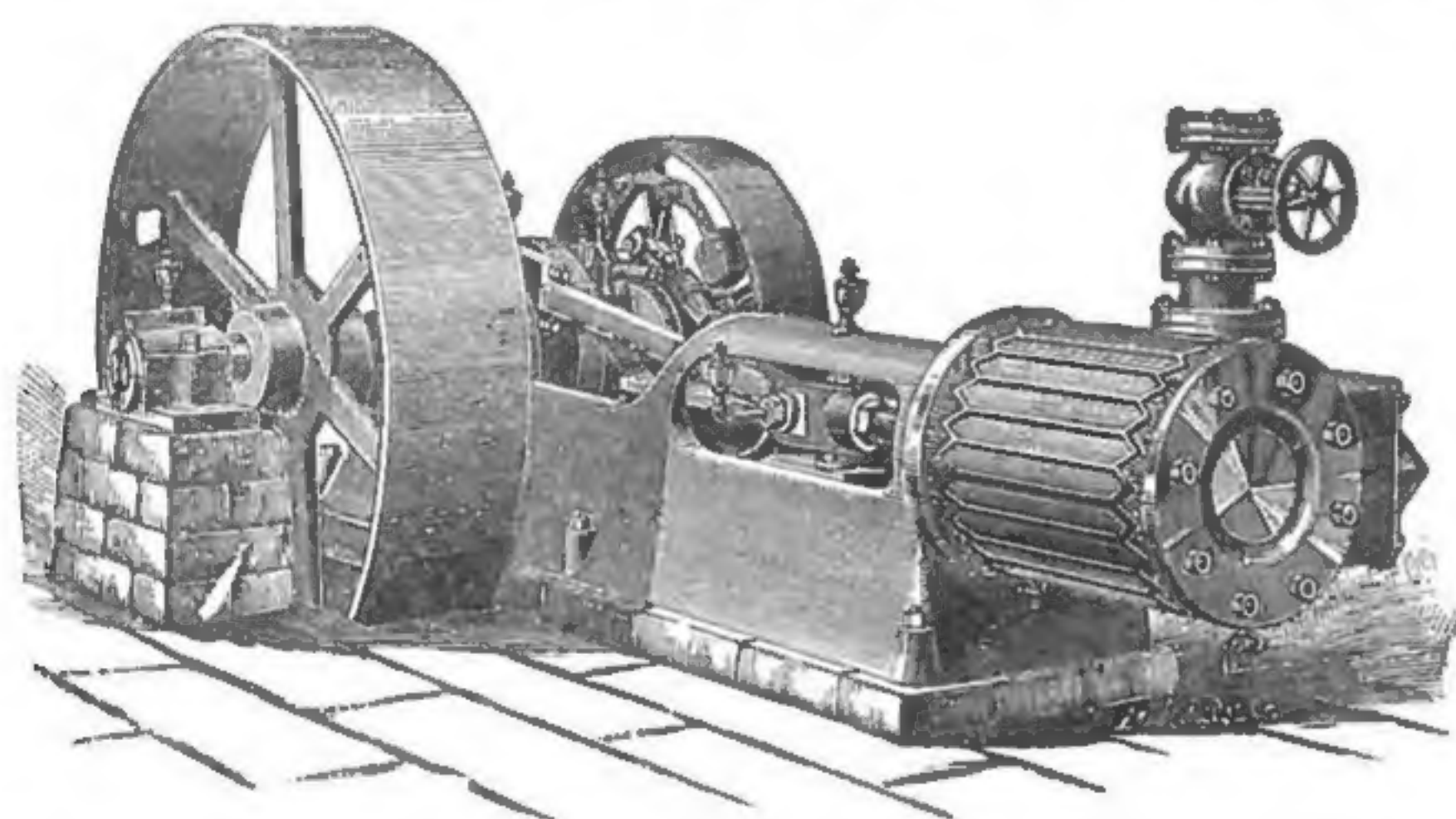
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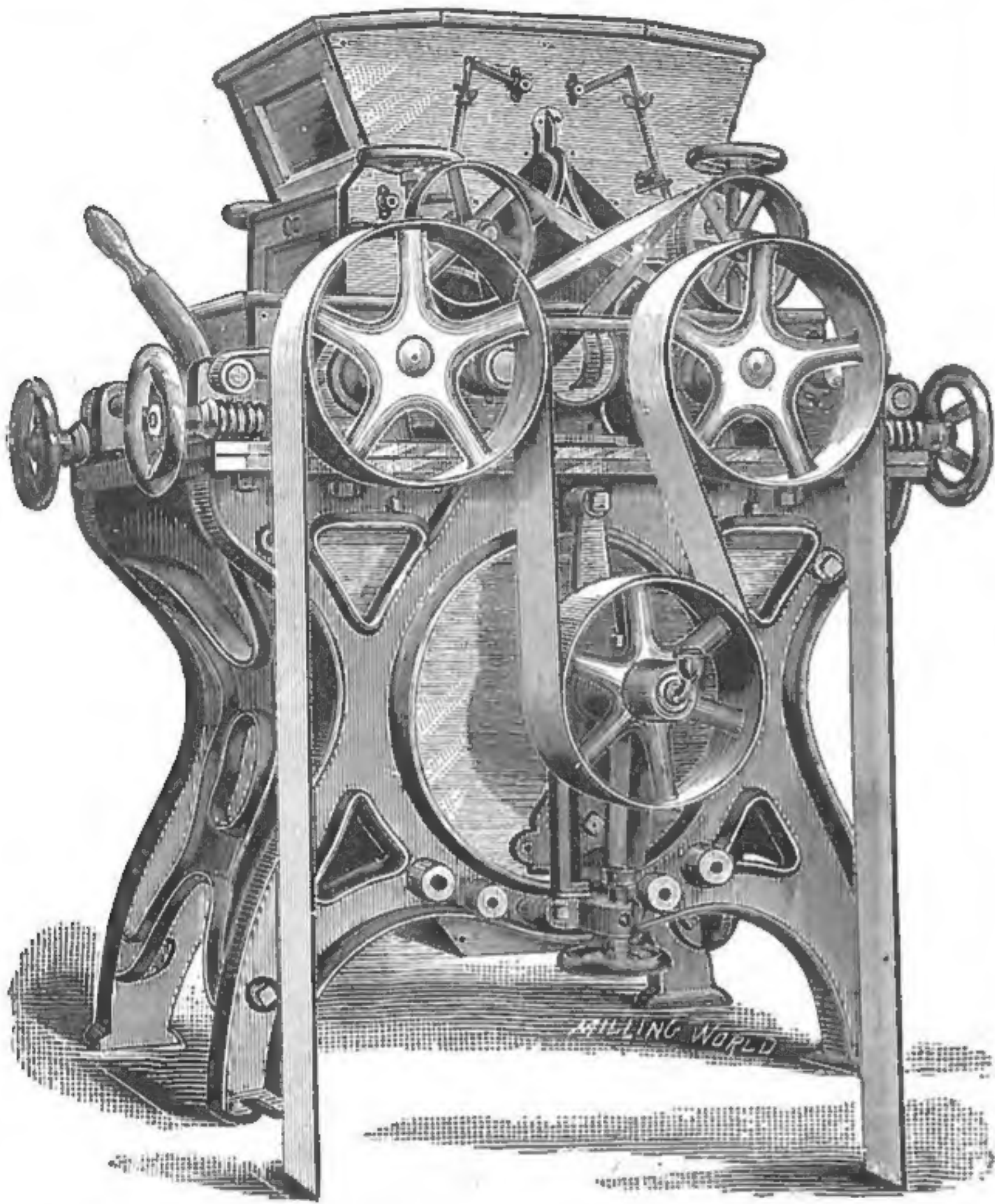


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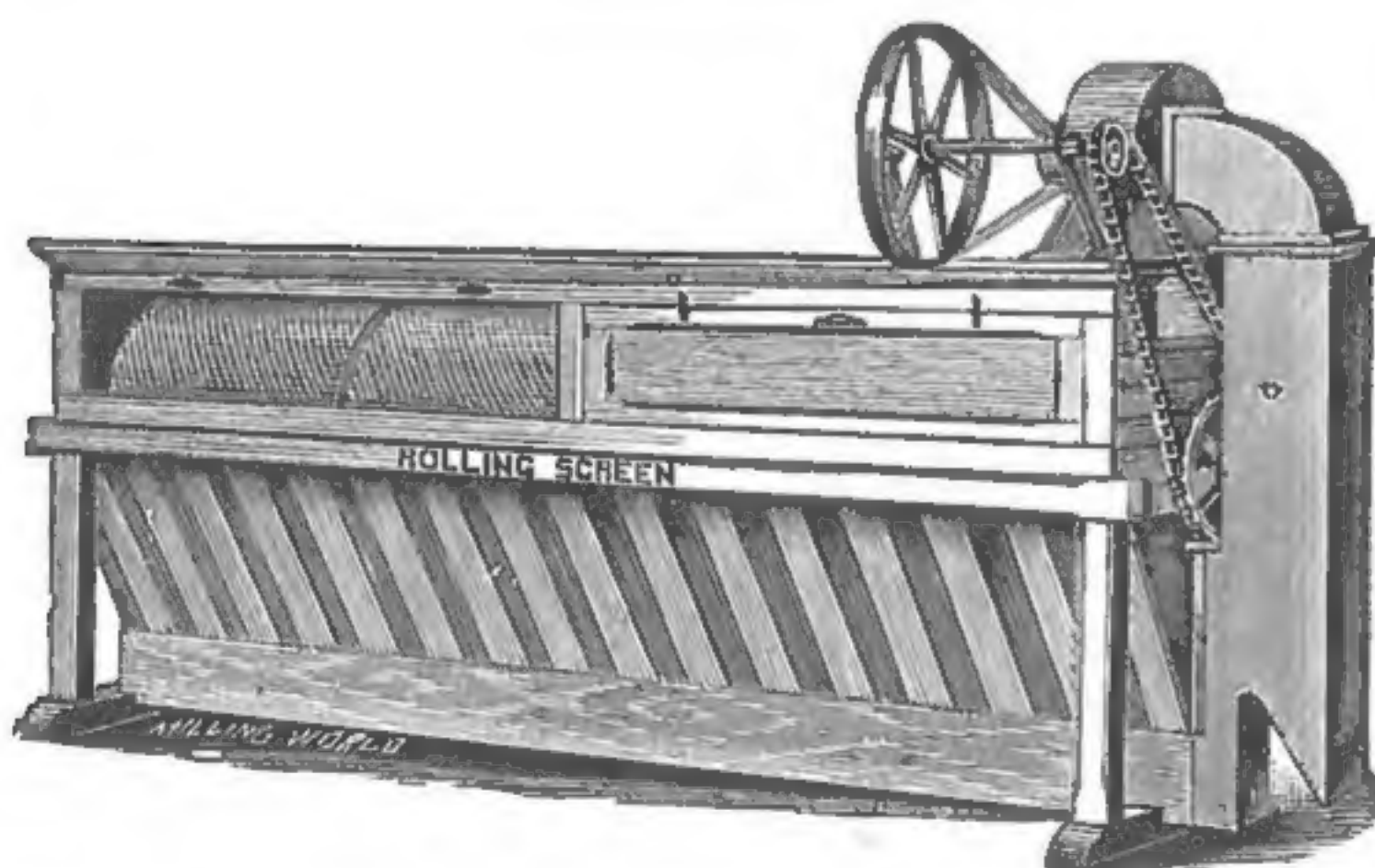
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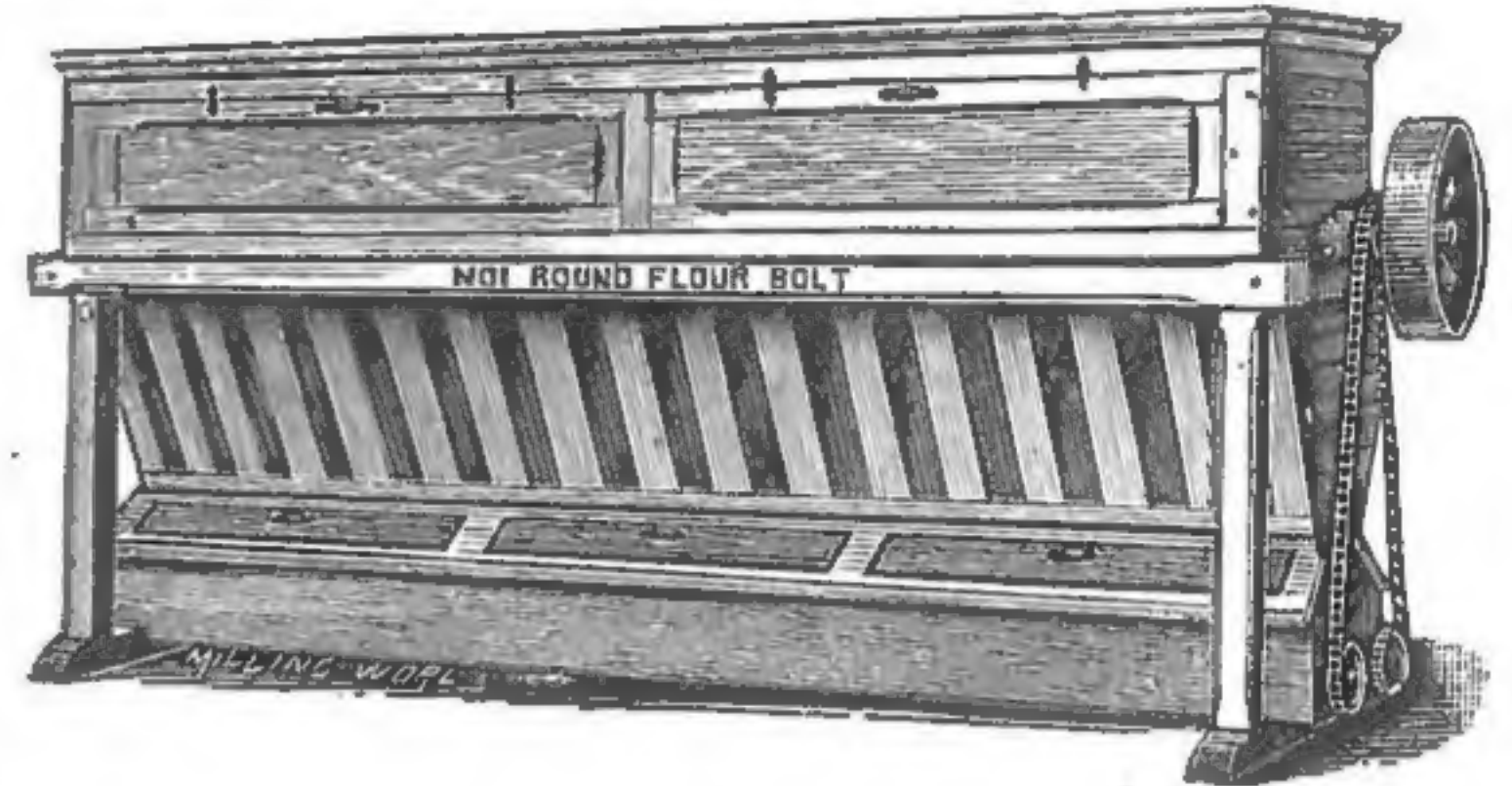
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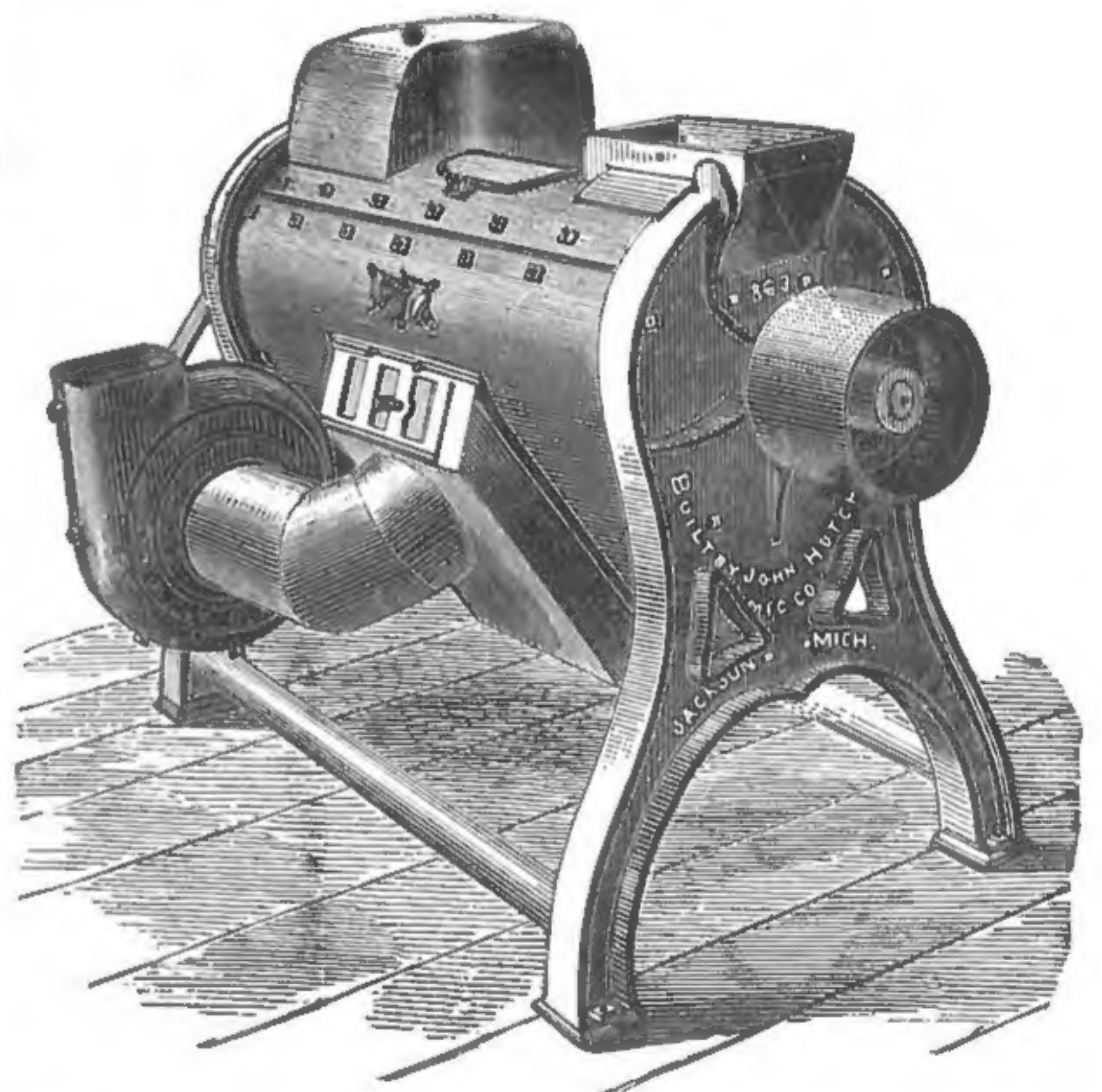


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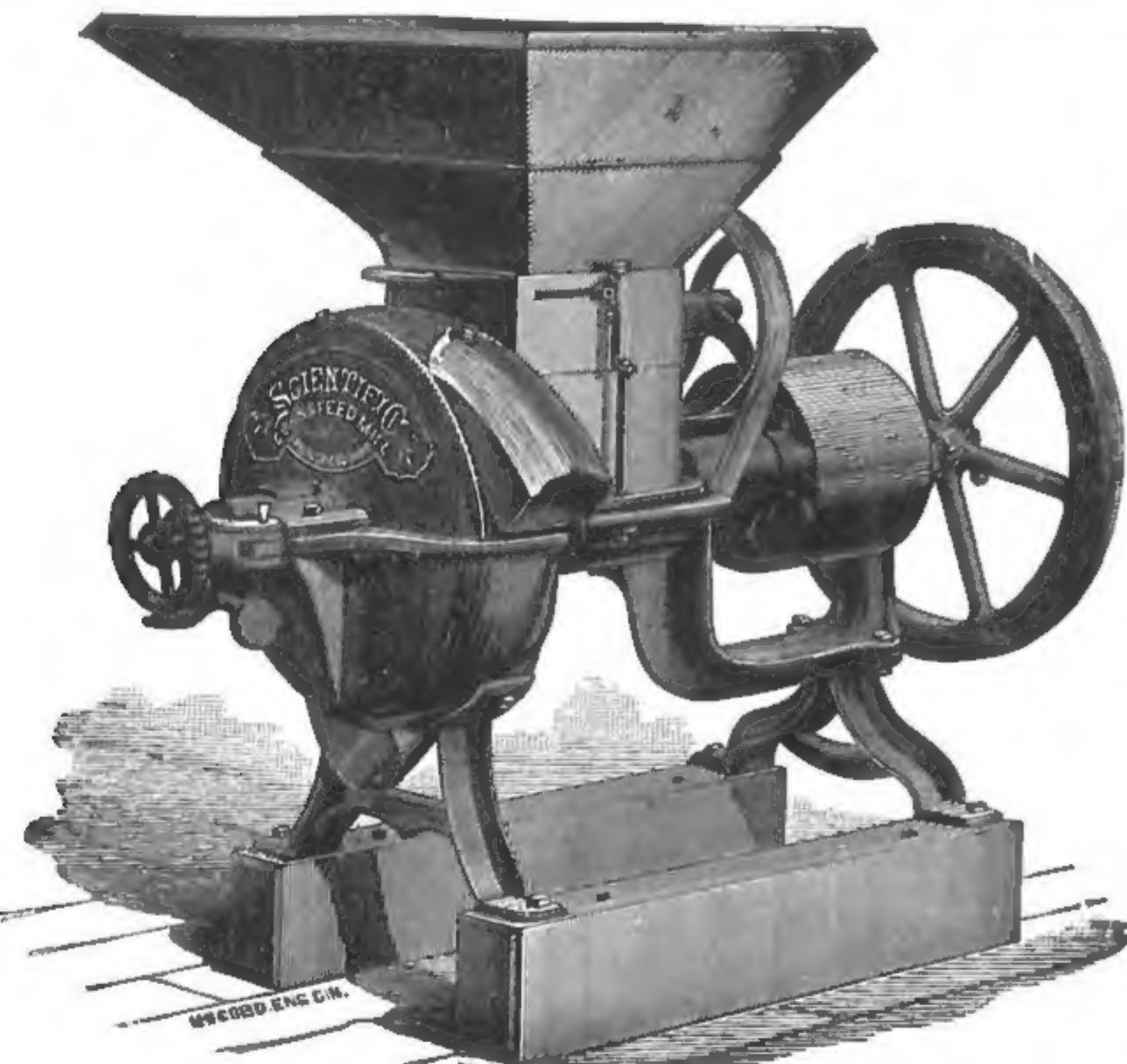
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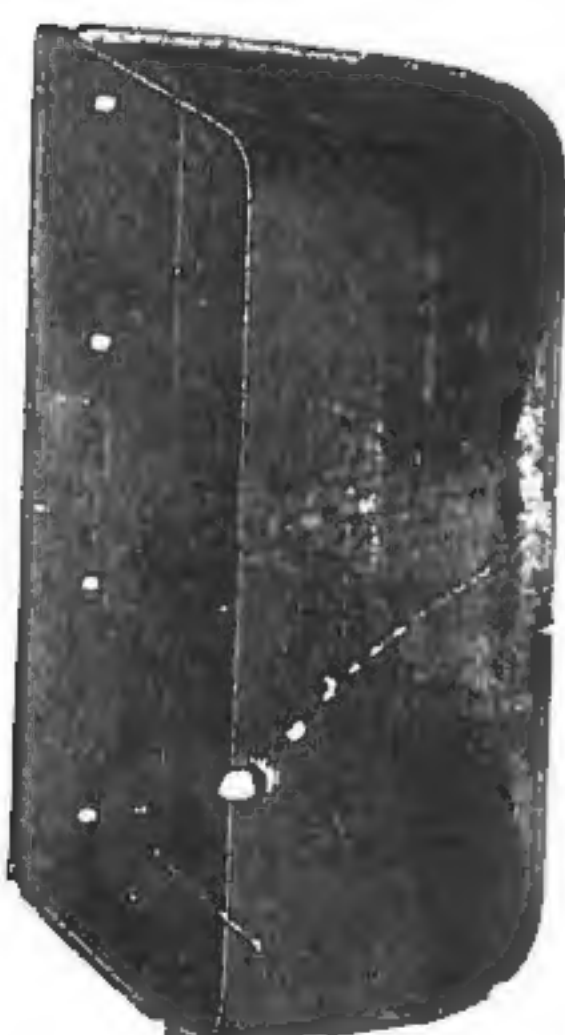
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